



City of Santa Barbara California

STAFF HEARING OFFICER STAFF REPORT

REPORT DATE: October 7, 2015
AGENDA DATE: October 14, 2015
PROJECT ADDRESS: 1240 W. Micheltorena Street (MST2014-00555)

TO: Susan Reardon, Senior Planner, Staff Hearing Officer
FROM: Planning Division, (805) 564-5470
 Danny Kato, Senior Planner *AKA for DYK*
 Suzanne Riegle, Associate Planner *SR*

I. PROJECT DESCRIPTION

Proposal for a new three-story, 2,011 square foot, single-family residence on a 6,098 square foot vacant parcel with a 73% slope in the Hillside Design District. A total of eight specimen oak trees will be removed and replaced with 40 oak saplings. The proposal includes approximately 952 cubic yards of grading under the main building footprint and to widen the improved public road in front of the residence to a width of 20 feet clear. The floor-to-lot-area ratio (FAR) is 74% of the required maximum FAR.

II. REQUIRED APPLICATIONS

The discretionary applications required for this project are:

1. A Front Setback Modification to allow the first story of the residence to encroach into the required fifteen-foot front setback (SBMC §28.15.060, §28.15.065 and §28.92.110);
2. A Front Setback Modification to allow the garage and the upper stories of the residence to encroach into the required twenty-foot front setback (SBMC §28.15.060, §28.15.065 and §28.92.110);
3. An Open Yard Modification to allow the additional open yard for sloped lots to be reduced to less than the required 160 square feet (SBMC §28.15.060 and §28.92.110); and
4. An Over Height Wall/Fence Modification to allow the proposed retaining walls and related safety railing within ten feet of the front lot line to exceed a maximum height of three and one-half feet (SBMC §28.87.170 and §28.92.110).

III. RECOMMENDATION

Staff recommends that the Staff Hearing Officer approve the project, subject to conditions contained in Exhibit A.

IV. SITE INFORMATION AND PROJECT STATISTICS

A. SITE INFORMATION

Applicant:	Mark Travers, Architect and Gelare Macon, Agent		
Property Owner:	Katherine L. Hahn		
Site Information			
Parcel Number:	041-101-010	Lot Area:	6,098 sq. ft.
General Plan:	Low Density Residential	Zoning:	R-1
Existing Use:	Vacant	Topography:	73% avg. slope
Adjacent Land Uses			
North – Residential		East - Residential	
South - Residential		West – Oak Woodland	

B. PROJECT STATISTICS

	Proposed
Basement	765 sq. ft. (net)
1st Floor	637 sq. ft. (net)
2nd Floor	609 sq. ft. (net)
Total	2,011 sq. ft. (net)
Floor Area Ratio	0.33 = 74% of Maximum Required FAR
Grading	992 cu. yds. (cut/export)

V. ZONING CONSISTENCY ANALYSIS

Standard	Requirement/ Allowance	Proposed
Setbacks		
-Front	10' – first floor	0' - 5'*
	15' – garage & upper floors	0' - 8'*
-Interior	5'	> 5'
-Rear	5'	> 5'
Setback Reduction	As identified above, the required front setback per SBMC §28.15.060 is reduced by five feet per SBMC §28.15.065 due to slope of the front half of the lot.	
Building Height	30'	29'
Parking	2 covered spaces	2 covered spaces
Open Yard	1,250 sq. ft.; 20' min. dimension ea. direction	> 1,250 sq. ft.
Additional Open Space	160 sq. ft. flat area, 10' min. dimension ea. direction	149.5 sq. ft. flat area*

Lot Coverage			
-Building	N/A	875 sq. ft.	14.4%
-Paving/Driveway	N/A	210 sq. ft.	3.4%
-Landscaping	N/A	5,013 sq. ft.	82.2%

*Modification requested

The irregularly shaped lot has over 90 linear feet of street frontage but has a minimum depth of only 43 feet at its narrowest point. In addition, the subject lot is significantly constrained by the existing topography with an average slope of 73%, a number of existing mature oak trees located throughout the property, and the narrowing of the public right-of-way in front of the subject parcel. The property abuts, but is not located in, the High Fire Hazard Area.

Due to the narrowing of the roadway in front of the subject parcel, neighbors expressed concern regarding emergency access, both during construction and after the lot is developed, beyond the subject lot and into the substandard cul-de-sac that serves three additional residences. A survey reveals that the parcel's front lot line is located between eight to nine feet behind the location of the existing retaining wall at the edge of the paved public right-of-way.

In order to establish a building pad for a floor plan consisting of a room, bathroom, hallway, stairway and a two-car garage, the proposed project will require the construction of a 41-foot tall retaining wall that is proposed at roughly a 100-degree angle to retain the substantial cut required for the building pad. See Sheet A3.0 of the plan set for a cross section that demonstrates the retaining walls' position. The base of the wall is located approximately 27 feet from the front lot line and the wall will be as close as 6'-6" to the rear property line at the top.

With the approval of the Modifications described below, the project would meet the requirements of the R-1 One-Family Residence Zoning Ordinance.

Front Setback Modifications

The living space of the basement (first floor) and second floor have been minimized and they are set back 5 feet from the front property line (10 feet is required). The garage and second floor deck are proposed to be constructed with a zero setback (15 feet is required). The garage and second floor deck have a width of 21 feet along the front property line, which is the minimum required to accommodate a conforming (20-foot wide) garage. The third floor is setback eight feet from the front property line (15 feet is required).

Transportation Division staff recommended that the garage be located at the front lot line to prevent cars from parking in front of the garage and encroaching into the right-of-way, as occurs when garages have 0-20 feet of setback from the front property line. Therefore, staff is supportive of the setback modification for the garage.

Due to the steep slope of the lot, and the desire to minimize grading to the extent feasible, staff finds that the requested front setback modifications for the residence are appropriate. Additionally, the subject lot is set back approximately eight- to nine-feet from the improved right-of-way, which will give the appearance of a greater setback, and the design has been found compatible with the neighborhood by the Single Family Design Board (see discussion in Section VIII of this staff report).

Open Space Modification

If the average slope of the open yard is greater than 20%, the Zoning Ordinance requires at least one flat area with a minimum size of 160 square feet and perpendicular dimensions of not less than 10 feet. As proposed, the project will not meet the dimension or total area required. The proposed flat area for this project is located in two separate locations, a 60 square foot deck above the garage and an approximately 89.5 square foot patio area on the ground level for a total of 149.5 square feet.

A previous version of the project was reviewed by the Single Family Design Board (SFDB), which included a larger upper level deck on the roof. However, the design raised a number of concerns for not only the SFDB, but also many neighbors in the immediate vicinity. The applicant revised the project to eliminate the roof deck, which resulted in the project's noncompliance with the ordinance. The first story has a minimal footprint totaling 876 square feet including a garage and a small amount of living space. To comply with the additional open space requirements, either the first floor living space would have to recess further from the street (by a minimum of 5 feet to obtain the minimum 10-foot dimension required by the ordinance), which would result in significant floor plan changes, or the second floor deck would have to be enlarged by a minimum of 5 feet (to obtain the minimum 10 foot dimension), resulting in significant reduction of the living area. The doors leading out to the second floor deck open wide, providing the feeling of bringing the outside in. Staff supports the request because the design as proposed screens the vertical wall necessary behind the house and potential alternate solutions would result in additional grading, significant loss of habitable area, or a rooftop deck that could have adverse visual impacts on the visual openness of the public street frontage and adversely impact adjacent neighbors.

Over Height Wall/Fence Modification

The proposed site wall at the front of the house exceeds the allowed maximum height of three and one-half feet and is located within ten feet of the front lot line. Due to the steep topography of the lot, the applicant is proposing retaining walls at the front property line and within the public right-of-way to allow vehicular access. The proposed retaining walls comply with site distances required by Transportation Division staff. Although the wall could be moved to comply with the height requirement, it would require additional grading and engineering and could result in additional parking or storage of items in the front setback and public right-of-way. As designed, it is unclear whether the building code will require an additional safety railing. Due to the location of the walls that are within the public right-of-way, the applicant will be required to obtain a Minor Encroachment Permit and a condition has been incorporated into the recommended conditions of approval (Exhibit A)

In summary, due to the significant constraints as described above the requested Front Setback, Additional Open Space, and Wall Height Modifications are necessary to secure an appropriate on the lot and are consistent with the purpose and intent of the ordinance. Staff support is based on the proposed design being integrated into the hillside and the SFDB's determination that the project is compatible with the neighborhood.

VI. ISSUES

Staff recommends that the Staff Hearing Officer focus on the issues of site constraints described in Section IV of this staff Report and the relevant issues described below, including: road widening, tree removal, grading, and air quality. Staff has identified these as important issues.

Road Widening/Traffic Control

At the December 1, 2014 SFDB meeting, the immediate neighbors raised the issue of maintaining emergency and vehicular access. Following the hearing, staff met with representatives from the Public Works and Fire Departments and discussed minimum access that would be required both during construction and at project completion. It was determined that to allow continued emergency access to the residences at the end of the street, the applicant must keep a minimum width of 16 feet clear, as shown on Traffic Control Plan (Exhibit B, Sheet A1.5). The final road width at the conclusion of the project will be increased to 20 feet in front of the subject parcel (Exhibit B, Sheet A1.1), allowing two vehicles to pass each other. The minimum widths required during construction and post construction have been included as conditions of approval. The traffic control plan and public improvements described above have been incorporated into recommended conditions of approval (Exhibit A).

Tree Removal

The surrounding lots and the subject lot are located in the Oak Woodland Habitat area. Eight specimen oak trees will be removed and a new landscaping plan (Exhibit B, Sheet L-1) including 40 oak saplings is proposed. Five of the trees that are proposed to be removed are located within the public right-of-way and are in fair health. The applicant has received approval from the City Arborist to remove these five trees. The proposed saplings will be located on-site at a minimum distance of 20 feet from the structure at the request of the Fire Department.

The property owner submitted a *Tree Assessment and Protection Plan*, an updated report, and subsequent addendum (Exhibit D) stating that the specimen trees proposed for removal are in poor to fair condition. The report further states that the biomass would be replaced in approximately five-years by the 40 proposed saplings (a 5:1 tree replacement ratio). Therefore, the removal and replacement of mature oaks has been determined to have a less than significant impact on the biological resource. Additional standard tree protection measures and recommendations were included in the report and have been incorporated into the recommended conditions of approval (Exhibit A) and should be reproduced on the landscaping and tree protection plans.

Grading

The project is proposing 992 cubic yards of cut on a 73% slope. The architect has designed the project to reduce the footprint and conceal the vertical wall that will be required as a part of the grading plan.

City regulations require that an erosion control plan be prepared by a licensed professional for all properties having a slope of over 15%. The applicant has submitted a letter from a consulting engineer and a *Soils Investigation* (Exhibit E) which provides geotechnical

recommendations related to the proposed project. The final recommendations made by the consulting engineering and soils investigation report are required to be reproduced and incorporated into the grading and shoring plans prior to permit issuance per the recommended conditions of approval (Exhibit A).

Air Quality

Staff consulted with Santa Barbara Air Pollution Control District (APCD) staff regarding potential air quality impacts related to the proposed grading and export of dirt. Based on the use of 10 cubic yard trucks and the number of trips proposed per day, the APCD screening table indicates that with the application of required air quality regulations for the Santa Barbara area, the air quality impacts are determined to be less than significant.

VII. ENVIRONMENTAL REVIEW

The environmental analyst determined that the project is exempt from further environmental review under the California Environmental Quality Act (CEQA) pursuant to Section 15183 of the CEQA Guidelines (Projects Consistent with a Community Plan or Zoning).

The project analysis found that with approval of requested modifications and subject to identified conditions of approval, the project would be consistent with General Plan and Zoning provisions and density designations. The preliminary environmental review included analysis of all environmental impact issues, including transportation, grading, air and water quality, visual aesthetics, and biological resources issues. The current proposed project minimizes the amount of grading by reducing the building footprint. The project design incorporates recommendations of the Transportation Division, geotechnical and hydrology reports, arborist report, and would be subject to standard conditions and Code requirements. With application of State, Regional, and City policies and standards (including General Plan policies, Zoning Ordinance standards, Storm Water Management provisions, tree replacement provisions, Building and Grading Code geotechnical provisions, Air Pollution Control District standard grading and construction measures, and Master Environmental Assessment guidelines), the project would not result in significant environmental impacts, and qualifies for an exemption from further environmental review.

The Program EIR for the General Plan and Zoning Ordinance updates (2011 and 2012 respectively) found environmental impacts of citywide growth to the year 2030 to be less than significant with application of standard regulatory measures or mitigated to less than significant levels, with the exception of significant cumulative traffic impacts. City Council findings of overriding consideration deemed the cumulative traffic impacts to be acceptable due to benefits of the Plan and implementing ordinance. These findings continue to apply for the current project.

VIII. DESIGN REVIEW

This project was reviewed by the Single Family Design Board (SFDB) on December 1, 2014 and January 26, 2015. The SFDB meeting minutes are attached as Exhibit F. On January 26, 2015, the SFDB continued the project to the Staff Hearing Officer with comments. The Board found the requested Modifications aesthetically appropriate and further stated that it would be impractical to build on the site without zoning modifications. The size, bulk, and scale of the

architecture are consistent with the neighborhood based on the streetscape, provided that the FAR is at 74%.

IX. FINDINGS

The Staff Hearing Officer finds that due to the site's significant constraints including, but not limited to, the lot's irregular shape, steep slope, shallow depth and further constraints described in section V of this Staff Report, the requested Front Setback, Additional Open Space, and Wall Height Modifications are necessary to secure the development of a single-family residence. Staff also finds that development of the site with a single-family residence is an appropriate improvement on the lot. The requested Modifications are consistent with the purpose and intent of the ordinance to promote low-density residential development that is well-integrated into the hillside. The Single Family Design Board's has determined that the project is compatible with the neighborhood. In addition, the subject lot is setback approximately eight-to nine-feet from the improved right-of-way, which will give the appearance of a greater setback. The subject property and the neighbors at the terminus of the street will benefit from the increased road width of twenty-feet allowing two vehicles to pass.

Said approval is subject to conditions of approval (Exhibit A) related to requirements for public improvements, best management practices for erosion control and sedimentation, and recommendations made by the consulting arborist, as discussed in this staff report.

Exhibits:

- A. Conditions of Approval
- B. Site Plan
- C. Applicant's letter, dated July 22, 2015
- D. Tree Assessment and Protection Plan, dated October 2014, update report dated May 15, 2015, and an Addendum to the Tree Assessment and Protection Plan dated July 27, 2015
- E. Letter from Robert M. Pride Consulting Engineer, dated March 10, 2015 and Soils Investigation prepared by Braun and Associates dated December 9, 2014
- F. SFDB Minutes

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STAFF HEARING OFFICER
CONDITIONS OF APPROVAL

1240 W MICHELTORENA STREET (MST2014-00555)
FRONT SETBACK, ADDITIONAL OPEN YARD AREA, AND WALL/FENCE HEIGHT MODIFICATIONS
OCTOBER 14, 2015

I. In consideration of the project approval granted by the Staff Hearing Officer and for the benefit of the owner(s) and occupant(s) of the Real Property, the owners and occupants of adjacent real property and the public generally, the following terms and conditions are imposed on the use, possession, and enjoyment of the Real Property:

A. **Order of Development.** In order to accomplish the proposed development, the following steps shall occur in the order identified:

1. Obtain all required design review approvals.
2. Submit an application for and obtain a Building Permit (BLD) to demolish any structures / improvements and/or perform rough grading. Comply with condition E "Construction Implementation Requirements."
3. Record any required documents (see Recorded Conditions Agreement Sections B and D.1.(f)).
4. Permits.
 - a. Submit an application for and obtain a Building Permit (BLD) for construction of approved development and complete said development.
 - b. Submit an application for and obtain a Public Works Permit (PBW) for all required public improvements and complete said improvements.

Details on implementation of these steps are provided throughout the conditions of approval.

B. **Recorded Conditions Agreement.** The Owner shall execute a *written instrument*, which shall be prepared by Planning staff, reviewed as to form and content by the City Attorney, Community Development Director and Public Works Director, recorded in the Office of the County Recorder, and shall include the following:

1. **Approved Development.** The development of the Real Property approved by the Staff Hearing Officer on **TBD** is limited to one dwelling unit and the improvements shown on the plans signed by the Staff Hearing Officer on said date and on file at the City of Santa Barbara.
2. **Uninterrupted Water Flow.** The Owner shall allow for the continuation of any historic flow of water onto the Real Property including, but not limited to, swales, natural watercourses, conduits and any access road, as appropriate.
3. **Recreational Vehicle Storage Limitation.** No recreational vehicles, boats, or trailers shall be stored on the Real Property unless enclosed or concealed from view as approved by the Single Family Design Board.

4. **Landscape Plan Compliance.** The Owner shall comply with the Landscape Plan approved by the Single Family Design Board (SFDB). Such plan shall not be modified unless prior written approval is obtained from the SFDB. The landscaping on the Real Property shall be provided and maintained in accordance with said landscape plan, including any tree protection measures. If said landscaping is removed for any reason without approval by the SFDB, the owner is responsible for its immediate replacement.
 5. **Oak Tree Protection.** The existing oak tree(s) shown on the Tree Protection and Landscape Plan shall be preserved, protected, and maintained in accordance with the recommendations contained in the arborist's report prepared by Bill Spiewak, dated May 15, 2015 and addendum dated July 27, 2015.
 6. **Storm Water Pollution Control and Drainage Systems Maintenance.** Owner shall maintain the drainage system and storm water pollution control devices in a functioning state and in accordance with the Storm Water BMP Guidance Manual and Operations and Maintenance Procedure Plan approved by the Creeks Division. Should any of the project's surface or subsurface drainage structures or storm water pollution control methods fail to capture, infiltrate, and/or treat water, or result in increased erosion, the Owner shall be responsible for any necessary repairs to the system and restoration of the eroded area. Should repairs or restoration become necessary, prior to the commencement of such repair or restoration work, the Owner shall submit a repair and restoration plan to the Community Development Director to determine if an amendment or a new Building Permit is required to authorize such work. The Owner is responsible for the adequacy of any project-related drainage facilities and for the continued maintenance thereof in a manner that will preclude any hazard to life, health, or damage to the Real Property or any adjoining property.
 7. **Geotechnical Liability Limitation.** The Owner understands and is advised that the site may be subject to extraordinary hazards from landslides, erosion, retreat, settlement, or subsidence and assumes liability for such hazards. The Owner unconditionally waives any present, future, and unforeseen claims of liability on the part of the City arising from the aforementioned or other natural hazards and relating to this permit approval, as a condition of this approval. Further, the Owner agrees to indemnify and hold harmless the City and its employees for any alleged or proven acts or omissions and related cost of defense, related to the City's approval of this permit and arising from the aforementioned or other natural hazards whether such claims should be stated by the Owner's successor-in-interest or third parties.
 8. **Areas Available for Parking.** All parking areas and access thereto shall be kept open and available in the manner in which it was designed and permitted.
- C. **Design Review.** The project, including public improvements, is subject to the review and approval of the Single Family Design Board (SFDB). The SFDB shall not grant project

design approval until the following Staff Hearing Officer land use conditions have been satisfied.

1. **Parks and Recreation Commission Tree Removal Approval.** Submit to the Planning Division verification of approval from the Parks and Recreation Commission for the removal of the five oak trees located in the unimproved right-of-way.
2. **Landscaping Under Trees.** Landscaping under the tree(s) shall be compatible with the preservation of the tree(s), as determined by the SFDB.
3. **Oak Trees.** The following additional provisions shall apply to existing oak trees on site:
 - a. No irrigation system shall be installed within three feet of the dripline of any oak tree.
 - b. Oak trees greater than four inches (4") in diameter at four feet (4') above grade removed as a result of the project shall be replaced at a five to one (5:1) ratio, at a minimum five (5) gallon size, from South Coastal Santa Barbara County Stock.
 - c. The use of herbicides or fertilizer shall be prohibited within the drip line of any oak tree.
 - d. No storage of heavy equipment or materials, or parking shall take place within five (5) feet of the dripline of any oak tree.
4. **Arborist's Report / Tree Protection Plan.** Include a note on the plans that the recommendations/conditions contained in the arborist's report / Tree Protection Plan prepared by Bill Spiewak, dated October 2014, May 15, 2015 and the July 27, 2015 addendum shall be implemented.
 - a. **Tree Protection.** All trees not indicated for removal on the approved tree protection and landscape plan shall be preserved, protected, and maintained, in accordance with the Tree Protection Plan, if required, and/or any related Conditions of Approval.
 - b. **During Construction.**
 - i. **Pre-Construction Meeting.** A pre-construction meeting shall be held with the project arborist and the contractors, prior to the commencement of work, to discuss tree protection measures.
 - ii. **Tree Protection Zones (TPZ).** Install fencing, as designated on the site plan, to establish tree protection zones (TPZ). These TPZs should be at the outside edge of all work areas, around trees. Fences must be maintained in an upright positions throughout the duration of the project.

- iii. **Storage and Staging in TPZ.** The TPZs should be void of all activities, including parking vehicles, operation of equipment, storage of materials, and dumping (including temporary spoils from excavation). Due to the limited size of the site, planning is important proper to excavation to assure that all spoils and materials are stored outside of the TPZs.
 - iv. **Arborist Monitoring.** All excavation and grading near trees should be monitored by the project arborist.
 - v. **Root Pruning.** Any roots encountered during grading that are ½" or greater shall be cleanly cut.
 - vi. **Tree Pruning.** Tree pruning, where limbs may conflict with equipment and proposed structures, should be done prior to the excavation and grading.
 - vii. **Arborist Supervision of Tree Pruning.** Pruning should be performed or supervised by a qualified Certified Arborist. The project arborist should review the goals with the workers prior to the commencement of any tree pruning. Tree workers should be knowledgeable of *ISA Best Management Practices for Tree Pruning*.
 - viii. **Supplemental Irrigation.** It may be determined by project arborist that supplemental irrigation is necessary to aid trees that incur root loss and/or during hot periods.
 - ix. **Relocation of Oak Seedlings.** Oak seedlings and saplings less than four inches (4") at four feet (4') above the ground that are removed during construction shall be transplanted where feasible. If transplantation is not feasible, replacement trees shall be planted at a minimum one to one (1:1) ratio. Replacement trees shall be a minimum of one (1) gallon size derived from South Coastal Santa Barbara County stock.
5. **Appropriate Plants on Steep Slope.** Special attention shall be paid to the appropriateness of the existing and proposed plant material on the steep slope. All existing succulent plants that add weight to the steep slope and/or contribute to erosion shall be removed in a manner that does not disturb the root system and replaced with appropriate plant material in a manner that does not increase the rate of erosion.
6. **Irrigation System.** The irrigation system shall be designed and maintained with the most current technology to prevent a system failure. Watering of vegetation on the steep slope shall be kept to the minimum necessary for plant survival. The drip system along the steep slope shall be removed after one full season of plant growth.
7. **Landscape Screening.** Landscaping with low water use plants shall be provided to screen the retaining walls at the front of the residence.

8. **Screened Backflow Device.** The backflow devices for fire sprinklers, pools, spas and/or irrigation systems shall be provided in a location screened from public view or included in the exterior wall of the building, as approved by the SFDB.
 9. **Location of Dry Utilities.** Dry utilities (e.g. above-ground cabinets) shall be placed on private property unless deemed infeasible for engineering reasons. If dry utilities must be placed in the public right-of-way, they shall be painted "Malaga Green," and if feasible, they shall be screened as approved by SFDB.
 10. **Storm Water Management Program (SWMP).** Prior to receiving final approval by the Single-Family Design Board the following changes must be made to the report and shown on the plans:
 - a. From Figure 2 in the storm water report, it appears that a significant portion (approx. 40%) of the roof runoff will be directed from a downspout to the open-celled pavers. The open-celled pavers do not appear designed (i.e. limited infiltration rate) to take on run-on. All areas where roof runoff will be directed should be installed with the permeable pavers detailed on Figure 3 or some other type of BMP with an infiltration rate capable of handling a large volume of storm water.
 - b. On Figure 2 Clearly indicate how the roof runoff from the Eastern portion (indicated by 40% roof runoff) of the building will reach the BMPs. It is not clear whether this water will be routed offsite or to the open-celled pavers. Will this water be piped subsurface? Or will it spill onto the surface of the BMP?
 - c. Include the permeable pavement detail from Figure 3 on the plan set. Also, make a note on the detail that the sub-base #2 stone layer will be compacted in 4-6" lifts. Also, include detailed construction notes consistent with ICPI specifications to make sure the pavers will be installed properly and perform as intended. These specifications can be found here: <http://www.icpi.org/node/721>
 - d. For the bioretention BMPs, specify the type of soil media as 60 to 70% sand, 15 to 25% compost, and 10 to 20% clean topsoil; organic content 8 to 12%; pH 5.5 to 7.5. Please refer to page 6-13 of the City's Storm Water BMP Guidance Manual.
- D. **Requirements Prior to Permit Issuance.** The Owner shall submit the following, for review and approval by the Department listed below, prior to the issuance of any permit for the project. Some of these conditions may be waived for demolition or rough grading permits, at the discretion of the department listed. Please note that these conditions are in addition to the standard submittal requirements for each department.
1. **Public Works Department.**
 - a. **Approved Public Improvement Plans.** Public Improvement Plans as identified in condition D.1.c "West Micheltorena Street Public

Improvements" shall be submitted to the Public Works Department for review and approval. Upon acceptance of 30% conceptual public improvement plans, a Building Permit may be issued if the Owner has bonded for public improvements and executed the *Agreement to Construct and Install Improvements (Not a Subdivision)*.

- b. **Water Rights Assignment Agreement.** The Owner shall assign to the City of Santa Barbara the exclusive right to extract ground water from under the Real Property in an *Agreement Assigning Water Extraction Rights*. Engineering Division Staff prepares said agreement for the Owner's signature.
- c. **West Micheltorena Street Public Improvements.** The Owner shall submit C-1 public improvement or Public Works plans for construction of improvements along the property frontage on West Micheltorena Street. Plans shall be submitted separately from plans submitted for a Building Permit, and shall be prepared by a licensed civil engineer registered in the State of California. As determined by the Public Works Department, the improvements shall include new and/or remove and replace to City standards, the following: Widening of the street by approximately four (4) feet for the entire project frontage of approximately 90 lineal feet. Additional width and length removal and replacement of asphalt concrete or concrete pavement on aggregate base may be necessary to provide an acceptable road section. An equal length of concrete curb and gutter is required. Approximately 30 lineal feet of 3'-4' high retaining wall may be needed on the western side of the project and approximately 5'-10' of 3'-4' high retaining wall may be needed on the eastern side of the project to accommodate the new curb alignment. Crack seal and slurry the entire width of the street along the entire subject property frontage and slurry seal a minimum of 20 feet beyond the limits of all trenching. Connection to and/or relocation or extension of City water and sewer mains and utilities; public drainage improvements with supporting drainage calculations and/or hydrology report for installation of drainage pipe or connection to existing City or County storm drain; preserve and/or reset survey monuments; supply and install directional/regulatory traffic control signs per the CA MUTCD during construction; storm drain stenciling; and provide adequate positive drainage from site. Any work in the public right-of-way requires a Public Works Permit.
- d. **Haul Routes Require Separate Permit.** Apply for a Public Works permit to establish the haul route(s) for all construction-related trucks with a gross vehicle weight rating of three tons or more entering or exiting the site.
- e. **Construction-Related Truck Trips.** Construction-related truck trips for trucks with a gross vehicle weight rating of three tons or more shall not be

scheduled during peak hours (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.) in order to help reduce truck traffic on adjacent streets and roadways.

- f. **Agreement to Construct and Install Improvements.** The Owner shall submit an executed *Agreement to Construct and Install Improvements*, prepared by the Engineering Division, an Engineer's Estimate, signed and stamped by a registered civil engineer, and securities for construction of improvements prior to execution of the Agreement. Payment and Performance securities will be required.
- g. **Encroachment Permits.** Any encroachment or other permits from the City or other jurisdictions (State, Flood Control, County, etc.) for the construction of improvements (including any required appurtenances) within their rights of way or easements shall be obtained by the Owner. The retaining wall on either side of the driveway, enhanced paving in the right-of-way and related features will require a Minor Encroachment Permit in accordance with SBMC §10.56. The house must be designed to be independent and permanently stable in the event the retaining walls located in the right-of-way are ever removed.

2. **Community Development Department.**

- a. **Recordation of Agreements.** The Owner shall provide evidence of recordation of the written instrument that includes all of the Recorded Conditions identified in condition B "Recorded Conditions Agreement" to the Community Development Department prior to issuance of any building permits.
- b. **Drainage and Water Quality.** The project is required to comply with **Tier 3** of the Storm Water BMP Guidance Manual, pursuant to Santa Barbara Municipal Code Chapter 22.87 treatment. The Owner shall submit a hydrology report prepared by a registered civil engineer or licensed architect demonstrating that the new development will comply with the City's Storm Water BMP Guidance Manual. Project plans for grading, drainage, stormwater facilities and treatment methods, and project development, shall be subject to review and approval by the City Building Division and Public Works Department. Sufficient engineered design and adequate measures shall be employed to ensure that no unpermitted construction-related or long-term effects from increased runoff, erosion and sedimentation, urban water pollutants (including, but not limited to trash, hydrocarbons, fertilizers, bacteria, etc.), or groundwater pollutants would result from the project.

For any proprietary treatment devices that are proposed as part of the project's final Storm Water Management Plan, the Owner shall provide an Operations and Maintenance Procedure Plan consistent with the manufacturer's specifications (describing schedules and estimated annual

maintenance costs for pollution absorbing filter media replacement, sediment removal, etc.). The Plan shall be reviewed and approved by the Creeks Division for consistency with the Storm Water BMP Guidance Manual and the manufacturer's specifications.

After certificate of occupancy is granted, any proprietary treatment devices installed will be subject to water quality testing by City Staff to ensure they are performing as designed and are operating in compliance with the City's Storm Water MS4 Permit.

- c. **Arborist's Monitoring.** Submit to the Planning Division an executed contract with a qualified arborist for monitoring of all excavation and grading work near trees during construction. The contract shall include a schedule for the arborist's presence during grading and construction activities, and is subject to the review and approval of the Planning Division.
- d. **Design Review Requirements.** Plans shall show all design, landscape and tree protection elements, as approved by the appropriate design review board and as outlined in Section C "Design Review," and all elements/specifications shall be implemented on-site.
- e. **Conditions on Plans/Signatures.** The final Resolution shall be provided on a full size drawing sheet as part of the drawing sets. Each condition shall have a sheet and/or note reference to verify condition compliance. If the condition relates to a document submittal, indicate the status of the submittal (e.g., Final Map submitted to Public Works Department for review). A statement shall also be placed on the sheet as follows: The undersigned have read and understand the required conditions, and agree to abide by any and all conditions which are their usual and customary responsibility to perform, and which are within their authority to perform.

Signed:

Property Owner

Date

Contractor

Date

License No.

Architect

Date

License No.

Engineer

Date

License No.

- E. **Construction Implementation Requirements.** All of these construction requirements shall be carried out in the field by the Owner and/or Contractor for the duration of the project construction, including demolition and grading.
1. **Construction Contact Sign.** Immediately after Building permit issuance, signage shall be posted at the points of entry to the site that list the contractor(s), contractor(s) telephone number(s), construction work hours, site rules, and construction-related conditions, to assist Building Inspectors and Police Officers in the enforcement of the conditions of approval. The font size shall be a minimum of 0.5 inches in height. Said sign shall not exceed six feet in height from the ground if it is free-standing or placed on a fence. It shall not exceed 24 square feet if in a multi-family or commercial zone or six square feet if in a single family zone.
 2. **Construction Storage/Staging.** Construction vehicle/ equipment/ materials storage and staging shall be done on-site. No parking or storage shall be permitted within the public right-of-way, unless specifically permitted by the Public Works Director with a Public Works permit.
 3. **Construction Parking.** During construction, free parking spaces for construction workers shall be provided on-site or off-site in a location subject to the approval of the Public Works Director.
 4. **Nesting Birds.** Birds and their eggs nesting on or near the project site are protected under the Migratory Bird Treaty Act and pursuing, hunting, taking, capturing, killing, or attempt to do any of the above is a violation of federal and state regulations. No trimming or removing brush or trees shall occur if nesting birds are found in the vegetation. All care should be taken not to disturb the nest(s). Removal or trimming may only occur after the young have fledged from the nests(s).
 5. **Grading Activities.** Time grading and soil disturbance to be completed during the dry season (May – November) and all disturbed soils shall be hydro-mulched or retaining walls completed by the onset of the rainy season.
 6. **Air Quality and Dust Control.** The following measures shall be shown on grading and building plans and shall be adhered to throughout grading, hauling, and construction activities:
 - a. During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 mph. Reclaimed water should be used whenever possible. However, reclaimed water should not be used in or around crops for human consumption.
 - b. Minimize amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less.

- c. If importation, exportation and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin.
- d. Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads.
- e. After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur.
- f. The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District prior to land use clearance for map recordation and land use clearance for finish grading of the structure.
- g. All portable diesel-powered construction equipment shall be registered with the state's portable equipment registration program OR shall obtain an APCD permit.
- h. Fleet owners of mobile construction equipment are subject to the California Air Resource Board (CARB) Regulation for In-use Off-road Diesel Vehicles (Title 13 California Code of Regulations, Chapter 9, § 2449), the purpose of which is to reduce diesel particulate matter (PM) and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles. For more information, please refer to the CARB website at www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.
- i. All commercial diesel vehicles are subject to Title 13, § 2485 of the California Code of Regulations, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.
- j. Diesel construction equipment meeting the California Air Resources Board (CARB) Tier 1 emission standards for off-road heavy-duty diesel engines shall be used. Equipment meeting CARB Tier 2 or higher emission standards should be used to the maximum extent feasible.
- k. Diesel powered equipment should be replaced by electric equipment whenever feasible.

- l. If feasible, diesel construction equipment shall be equipped with selective catalytic reduction systems, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by EPA or California.
- m. Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
- n. All construction equipment shall be maintained in tune per the manufacturer's specifications.
- o. The engine size of construction equipment shall be the minimum practical size.
- p. The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time. Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.

7. **Unanticipated Archaeological Resources Contractor Notification.** Standard discovery measures shall be implemented per the City master Environmental Assessment throughout grading and construction: Prior to the start of any vegetation or paving removal, demolition, trenching or grading, contractors and construction personnel shall be alerted to the possibility of uncovering unanticipated subsurface archaeological features or artifacts. If such archaeological resources are encountered or suspected, work shall be halted immediately, the City Environmental Analyst shall be notified and the Owner shall retain an archaeologist from the most current City Qualified Archaeologists List. The latter shall be employed to assess the nature, extent and significance of any discoveries and to develop appropriate management recommendations for archaeological resource treatment, which may include, but are not limited to, redirection of grading and/or excavation activities, consultation and/or monitoring with a Barbareño Chumash representative from the most current City qualified Barbareño Chumash Site Monitors List, etc.

If the discovery consists of possible human remains, the Santa Barbara County Coroner shall be contacted immediately. If the Coroner determines that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission. A Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization.

If the discovery consists of possible prehistoric or Native American artifacts or materials, a Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization.

A final report on the results of the archaeological monitoring shall be submitted by the City-approved archaeologist to the Environmental Analyst within 180 days of completion of the monitoring and prior to any certificate of occupancy for the project.

F. **Prior to Certificate of Occupancy.** Prior to issuance of the Certificate of Occupancy, the Owner of the Real Property shall complete the following:

1. **Repair Damaged Public Improvements.** Repair any public improvements (curbs, gutters, sidewalks, roadways, etc.) or property damaged by construction subject to the review and approval of the Public Works Department per SBMC §22.60. Where tree roots are the cause of the damage, the roots shall be pruned under the direction of a qualified arborist.
2. **Complete Public Improvements.** Public improvements, as shown in the public improvement plans or building plans, shall be completed.

G. **General Conditions.**

1. **Compliance with Requirements.** All requirements of the city of Santa Barbara and any other applicable requirements of any law or agency of the State and/or any government entity or District shall be met. This includes, but is not limited to, the Endangered Species Act of 1973 [ESA] and any amendments thereto (16 U.S.C. § 1531 et seq.), the 1979 Air Quality Attainment Plan, and the California Code of Regulations.
2. **Approval Limitations.**
 - a. The conditions of this approval supersede all conflicting notations, specifications, dimensions, and the like which may be shown on submitted plans.
 - b. All buildings, roadways, parking areas and other features shall be located substantially as shown on the plans approved by the Staff Hearing Officer.
 - c. Any deviations from the project description, approved plans or conditions must be reviewed and approved by the City, in accordance with the Planning Commission Guidelines. Deviations may require changes to the permit and/or further environmental review. Deviations without the above-described approval will constitute a violation of permit approval.
3. **Site Maintenance.** The existing site/structure(s) shall be maintained and secured. Any landscaping shall be watered and maintained until demolition occurs.
4. **Litigation Indemnification Agreement.** In the event the Planning Commission approval of the Project is appealed to the City Council, Applicant/Owner hereby agrees to defend the City, its officers, employees, agents, consultants and independent contractors ("City's Agents") from any third party legal challenge to the City Council's denial of the appeal and approval of the Project, including, but not limited to, challenges filed pursuant to the California Environmental Quality

Act (collectively "Claims"). Applicant/Owner further agrees to indemnify and hold harmless the City and the City's Agents from any award of attorney fees or court costs made in connection with any Claim.

Applicant/Owner shall execute a written agreement, in a form approved by the City Attorney, evidencing the foregoing commitments of defense and indemnification within thirty (30) days of being notified of a lawsuit regarding the Project. These commitments of defense and indemnification are material conditions of the approval of the Project. If Applicant/Owner fails to execute the required defense and indemnification agreement within the time allotted, the Project approval shall become null and void absent subsequent acceptance of the agreement by the City, which acceptance shall be within the City's sole and absolute discretion. Nothing contained in this condition shall prevent the City or the City's Agents from independently defending any Claim. If the City or the City's Agents decide to independently defend a Claim, the City and the City's Agents shall bear their own attorney fees, expenses, and costs of that independent defense.

NOTICE OF MODIFICATION APPROVAL TIME LIMITS:

The Staff Hearing Officer action approving the Modifications shall terminate two (2) years from the date of the approval, per Santa Barbara Municipal Code §28.87.360, unless:

1. An extension is granted by the Community Development Director prior to the expiration of the approval; or
2. A Building permit for the use authorized by the approval is issued and the construction authorized by the permit is being diligently pursued to completion and issuance of a Certificate of Occupancy.

NOTICE OF TIME LIMITS FOR PROJECTS WITH MULTIPLE APPROVALS (S.B.M.C. § 28.87.370):

If multiple discretionary applications are approved for the same project, the expiration date of all discretionary approvals shall correspond with the longest expiration date specified by any of the land use discretionary applications, unless such extension would conflict with state or federal law. The expiration date of all approvals shall be measured from date of the final action of the City on the longest discretionary land use approval related to the application, unless otherwise specified by state or federal law.

Zoning Analysis

SUBC. 28.90.100.G.1 PARKING REQUIREMENTS.
2 COVERED SPACES REQ'D
PROPOSED 2 COVERED SPACES (20'-0" x 25'
TREES TO BE REMOVED: = 3 ON SITE
= 5 OFF SITE

*PER SEC. 28.05.05, REDUCTION OF SETBACK, RELOCATIONS, WHERE THE AVERAGE NATURAL SLOPE OF THE FRONT YARD OF A LOT IS MORE THAN ONE FOOT (1') PER 10' HORIZONTAL, THE FRONT SETBACK REQUIRED BY SECTION 28.05.050 CAN BE REDUCED BY FIVE FEET (5').

***PER SEC. 28.02.10.2, WOODSCREENS
A MODIFICATION OF SETBACK, LOT AREA, STREET FRONTAGE, DETAIL, YARD, OUTDOOR LIVING SPACE.

***PER SEC. 28.02.10.2, WOODSCREENS
A MODIFICATION OF BUILDINGS WHERE THE MODIFICATION IS CONSISTENT WITH THE DISTANCE BETWEEN BUILDINGS. RELOCATIONS WHERE THE MODIFICATION IS CONSISTENT WITH THE DISTANCE BETWEEN BUILDINGS AND IS NECESSARY TO (a) SECURE AN APPROPRIATE IMPROVEMENT ON A LOT (b) PREVENT UNDESIRABLE WINDSHP OF AN ADJACENT LOT (c) IMPROVE THE UNIFORMITY OF IMPROVEMENT

REL. LIVING AREA

1 => AREA OF STAIR/ELEVATOR

01 => BASEMENT AREAS

1ST FLOOR

2ND FLOOR

TOTAL REL. LIVING AREA

= 46 + 22 SF (COUNTED ONLY ON ONE FLOOR)

= 68 SF

0 (EXCLUDED FROM CALCULATION)

703 = 66 = 637 SF

= 650 SF

= 1287 SF

b. SPECIAL RULES

i. STAIRS AND ELEVATORS

STAIRS OCCUPIED BY STAIRS OR AN ELEVATOR SHALT WITHIN THE EXTERIOR WALLS OF THE BUILDING SHALL BE EXCLUDED FROM THE CALCULATION OF THE GROSS FLOOR AREA.

ii. BASEMENTS AND CELLARS

THE FLOOR AREA OF A BASEMENT OR CELLAR SHALL EXCLUDED FROM THE CALCULATION OF NET FLOOR AREA IF THE VERTICAL DISTANCE FROM GRADE TO CEILING IS FOUR FEET (4') OR LESS. THE ENTIRE LENGTH OF THE PERIMETER OF THE BASEMENT OR CELLAR SHALL BE USED IN THE CALCULATION OF THE GROSS FLOOR AREA.

*SPAC 28 IS 0.03 C MAXIMUM NET FLOOR AREA (F.A.R.)
 NET LOT AREA = 6098 S.F.
 => MAX. NET FLOOR AREA = 1,200 S.F. + (25 X 6098) = 2724.5 S.F.
 MAX F.A.R. = 2724.4/6098 = 0.45
 F.A.R. = NET FLOOR AREA / LOT AREA = 1207/6098 = 0.21

*SPAC 28 IS 0.03 B: DETACHMENTS

28 IS GREATER THAN 20% - ADDITIONAL RULES FOR SLOPED GR OPEN VARDS, IF THE AVERAGE SLOPE OF THE VARD IS GREATER THAN 20%, THE LOT SHALL CONTAIN AT LEAST ONE FLAT AREA.	
A. MAX. SLOPE 10% TO 20%	= 134 SF
B. MAX. SLOPE 10% TO 20% X 10'-0"	= 1280 SF
C. MAX. SLOPE 22%	= 1414 SF
D. TOTAL	
***PROPOSED OPEN VARD- FLAT AREA	= 134 SF
***PROPOSED OPEN VARD- SLOPED VARD AT GRADE	= 1280 SF
TOTAL	= 1414 SF

[illegible]

*SEE BELOW FOR MODIFICATIONS OF NET LIVING AREA AND MAX. NET FLOOR AREA CALCULATION

PROPOSED BUILDING: SE	
BASIS: 11	
GARAGE:	NET 492 SF
LIVING:	NET 273 SF
1ST FLOOR:	
LIVING:	NET 637 SF
2ND FLOOR:	
NET 600 SF	
TOTAL:	NET 2011 SF

PROPOSED
TOTAL LOT AREA = 6098 SF
OPEN YARD (AT GRADE) = 1278 SF
BUILDING FOOTPRINT = 875 SF
PERMEABLE SURFACE = 210 SF
SWAC 2B IS 050. HEIGHT
MAX. HEIGHT = 30'-0"

ZONE	R-1
OCCUPANCY	R-3
SCOPE OF WORK	CONSTRUCTION OF NEW SFR W/ 2-CAR ATTACHED GARAGE
LOT CORNER	PROPOSED

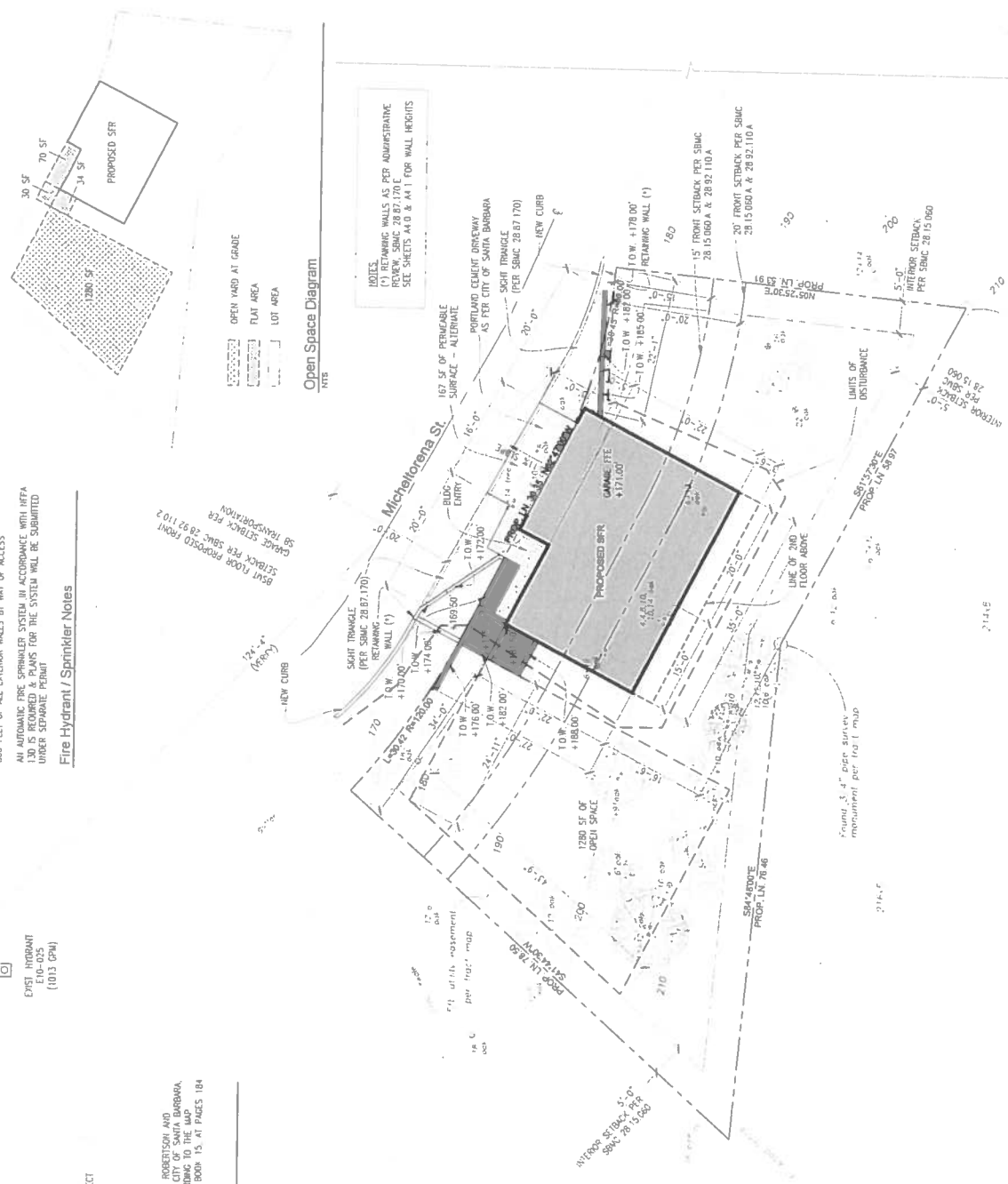
Fire Hydrant / Sprinkler Notes

EXIST HYDRANT
E10-025
(1013 GPM)

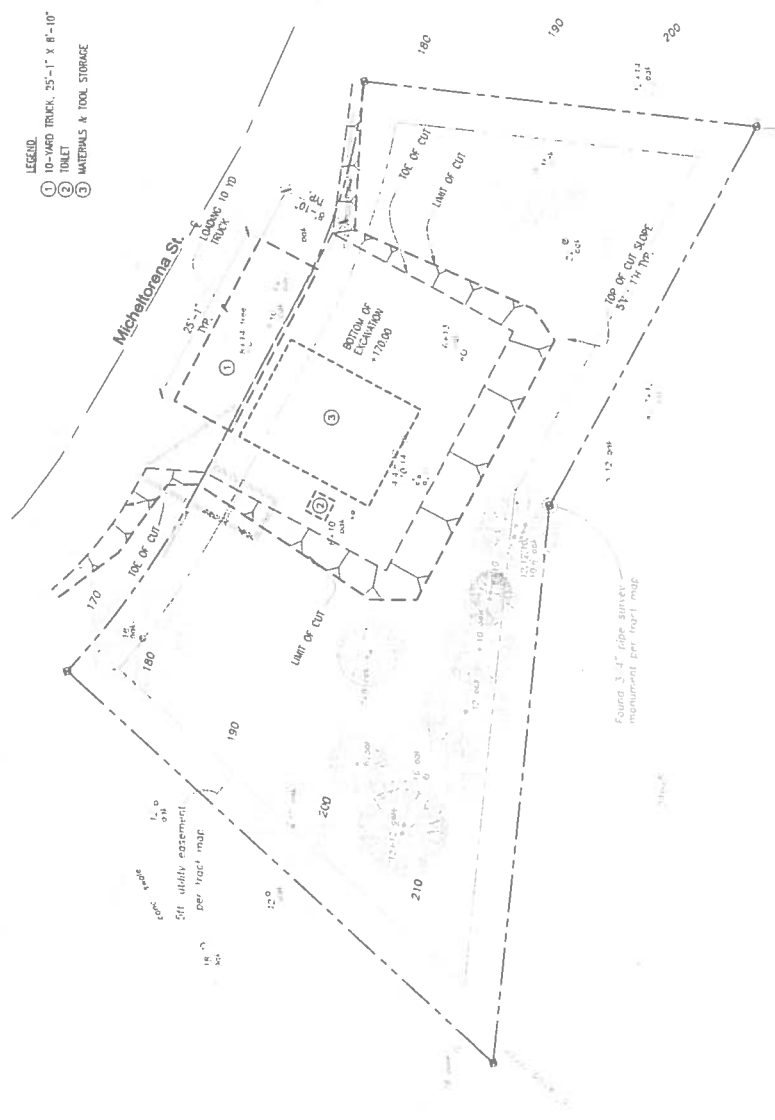
Fire Hydrant / Sprinkler Notes

Open Space Diagram

NOTES:
(*) RETAINING WALLS AS PER ADMINISTRATIVE
REVIEW, SBMC 28.87.170 C
SEE SHEETS A4.0 & A4.1 FOR WALL HEIGHTS



1 Excavation Plan and Construction Activity & Storage
Scale: 1/8"=1'-0"



- LEGEND**
- ① 10-YARD TRUCK, 25'-1" X 8'-10"
 - ② TOILET
 - ③ MATERIALS & TOOL STORAGE



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JE
MT
Date: 7/23/2015

Drawn:
Checked:

1240 W Micheltorena St
Santa Barbara, CA 93101

Erosion Control Plan

Submitted / Revisions

A1.4

COPYRIGHT ©



1 Scale: 1/8"=1'-0"

COMPOST SOCK

1. COMPOST SOCKS SHALL BE PLACED AT THE TOP OF THE SLOPE AT THE END OF EACH CONSTRUCTION PHASE.

2. COMPOST SOCKS SHALL BE PLACED AT THE TOP OF THE SLOPE AT THE END OF EACH CONSTRUCTION PHASE.

3. COMPOST SOCKS SHALL BE PLACED AT THE TOP OF THE SLOPE AT THE END OF EACH CONSTRUCTION PHASE.

4. COMPOST SOCKS SHALL BE PLACED AT THE TOP OF THE SLOPE AT THE END OF EACH CONSTRUCTION PHASE.

5. COMPOST SOCKS SHALL BE PLACED AT THE TOP OF THE SLOPE AT THE END OF EACH CONSTRUCTION PHASE.

TREE & VEGETATION PROTECTION

1. PROTECT ALL EXISTING TREES AND VEGETATION FROM CONSTRUCTION ACTIVITIES.

2. PROTECT ALL EXISTING TREES AND VEGETATION FROM CONSTRUCTION ACTIVITIES.

3. PROTECT ALL EXISTING TREES AND VEGETATION FROM CONSTRUCTION ACTIVITIES.

4. PROTECT ALL EXISTING TREES AND VEGETATION FROM CONSTRUCTION ACTIVITIES.

5. PROTECT ALL EXISTING TREES AND VEGETATION FROM CONSTRUCTION ACTIVITIES.

STABILIZED CONSTRUCTION ACCESS

1. STABILIZED ACCESS SHALL BE USED IN ALL AREAS OF THE SITE WITH VEHICLE TRAFFIC AND CONSTRUCTION ACTIVITIES.

2. STABILIZED ACCESS SHALL BE USED IN ALL AREAS OF THE SITE WITH VEHICLE TRAFFIC AND CONSTRUCTION ACTIVITIES.

3. STABILIZED ACCESS SHALL BE USED IN ALL AREAS OF THE SITE WITH VEHICLE TRAFFIC AND CONSTRUCTION ACTIVITIES.

4. STABILIZED ACCESS SHALL BE USED IN ALL AREAS OF THE SITE WITH VEHICLE TRAFFIC AND CONSTRUCTION ACTIVITIES.

5. STABILIZED ACCESS SHALL BE USED IN ALL AREAS OF THE SITE WITH VEHICLE TRAFFIC AND CONSTRUCTION ACTIVITIES.

FILTER FENCE

1. FILTER FENCES SHALL BE USED AT THE END OF EACH CONSTRUCTION PHASE.

2. FILTER FENCES SHALL BE USED AT THE END OF EACH CONSTRUCTION PHASE.

3. FILTER FENCES SHALL BE USED AT THE END OF EACH CONSTRUCTION PHASE.

4. FILTER FENCES SHALL BE USED AT THE END OF EACH CONSTRUCTION PHASE.

5. FILTER FENCES SHALL BE USED AT THE END OF EACH CONSTRUCTION PHASE.



ADJACENT STR

Consultant

Stamp of Recd



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Berkeley, CA 94702
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Drawn: JE
Checked: MT
Date: 7/23/2015

1240 W Micheltorena St
Santa Barbara, CA 93101

Stamp of Recd

A1.5

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NOTE:
FLAGGER WILL CALL (1) 1000 TRUCK @ A
TIME ALTERNATING W/ 2ND WAITING @ THE
BOTTOM OF MICHELTORENA PARKED LEGALLY
94 TRUCK TRIPS TO APPROVED EXPORT SITE

LEGEND:
SON
CORE
WORK AREA



EXIST. HYDRANT

ADJACENT SFR



1 Traffic Control Plan
Scale 1/8"=1'-0"

1240 W Micheltorena St.
Santa Barbara, CA 93101

Drawn: MT
Checked: JE
Date: 7/23/2015

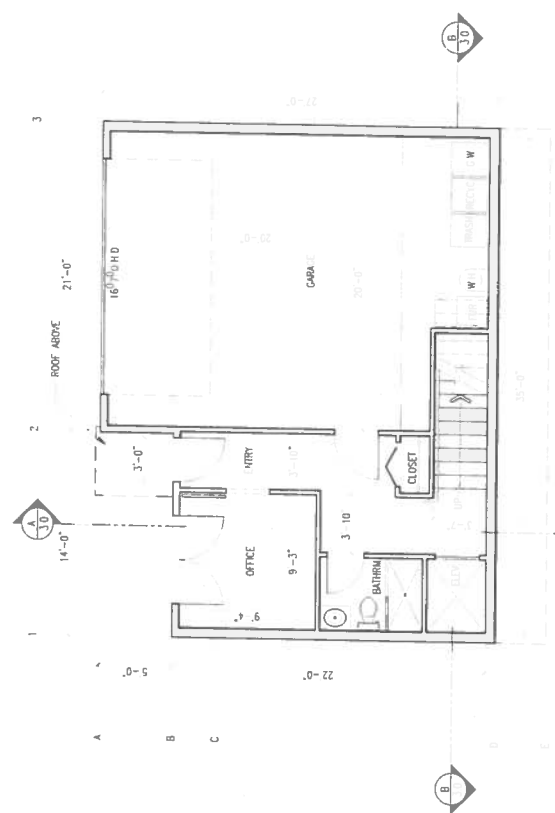
Mark Travers Architects, MA
2315 East Plaza Street
Santa Barbara, CA 93101
Tel: 805-963-8408
Fax: 805-963-3238



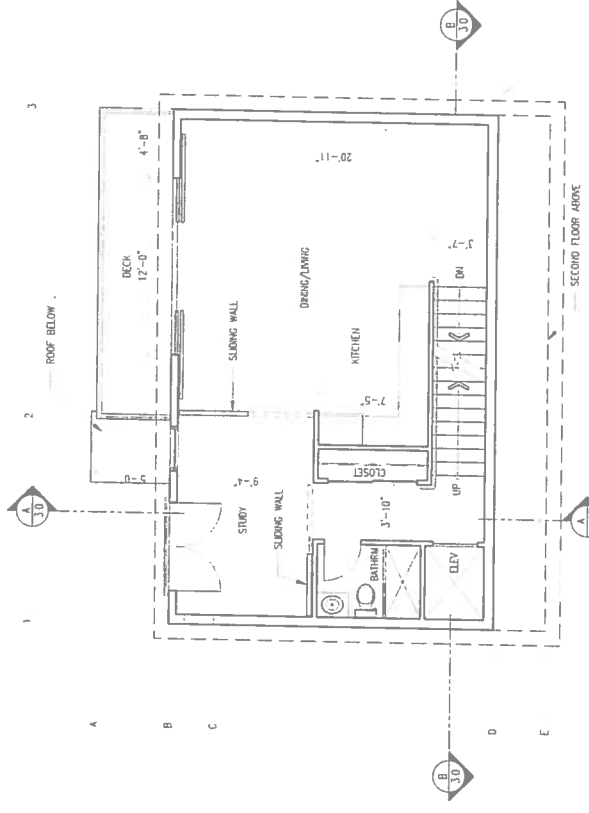
State of California

Contract

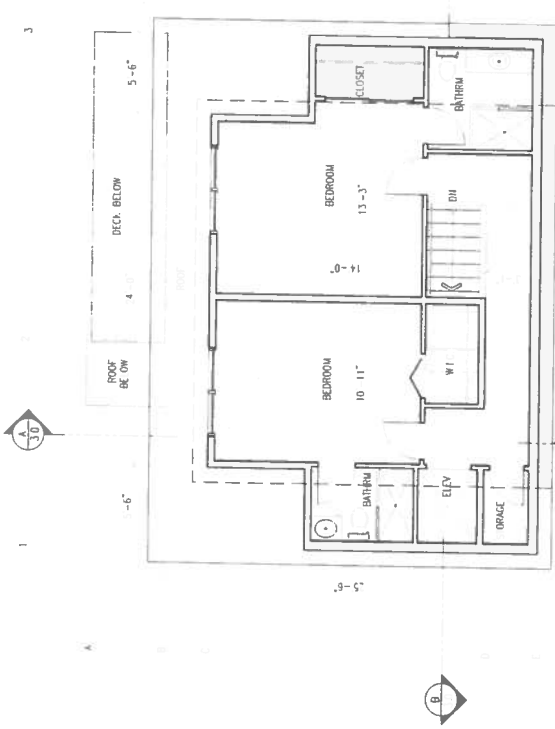
Basement Floor Plan
Scale: 1/4"=1'-0"



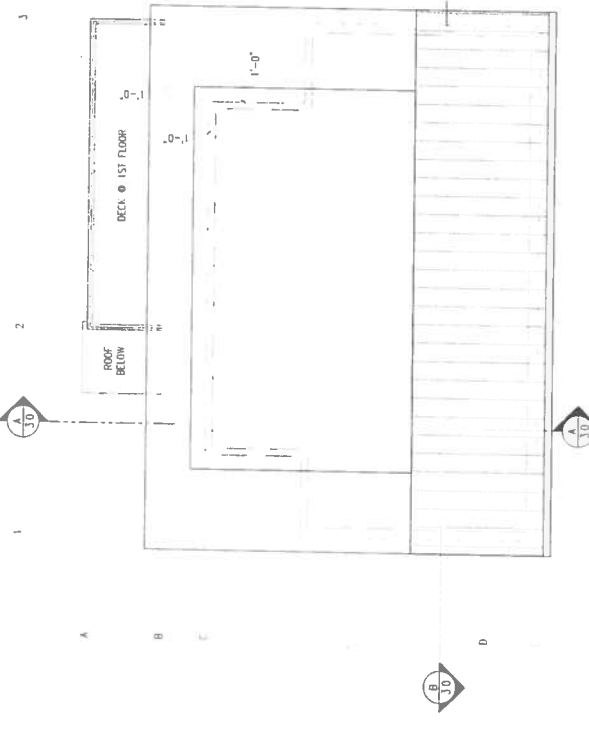
First Floor Plan
Scale: 1/4"=1'-0"



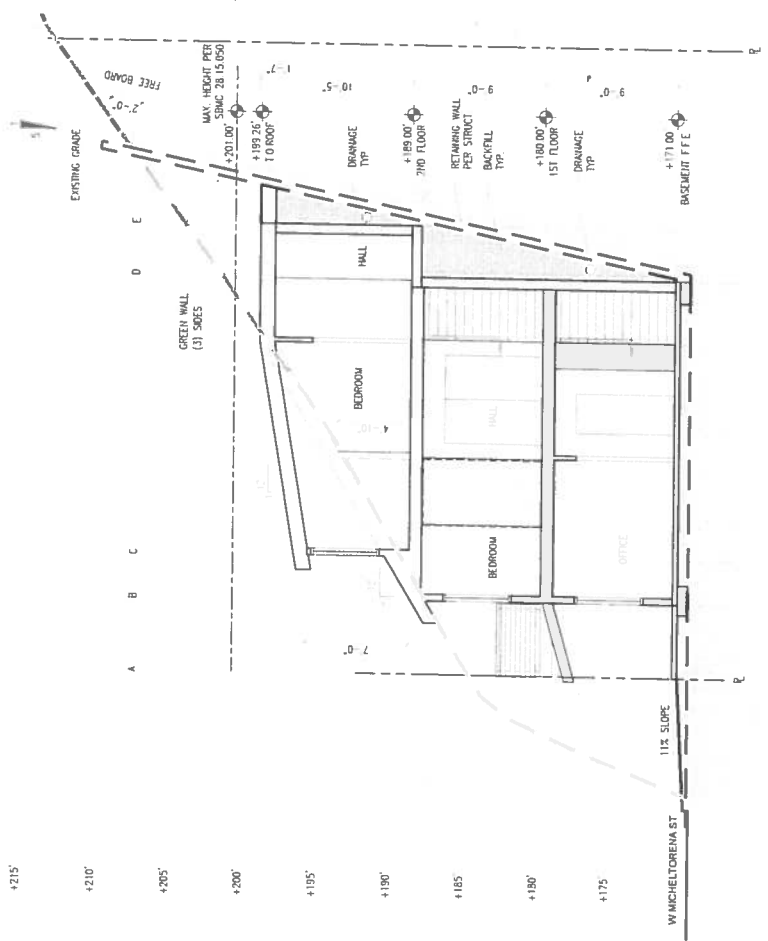
Second Floor Plan
Scale: 1/4"=1'-0"



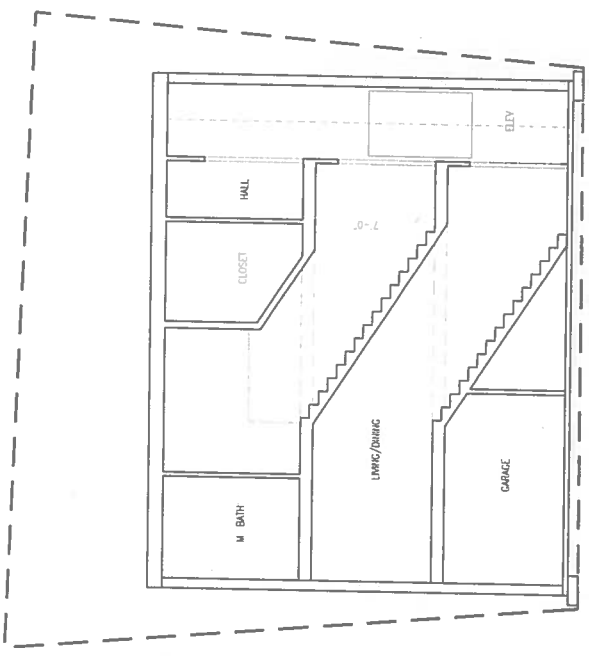
Roof Plan
Scale: 1/4"=1'-0"

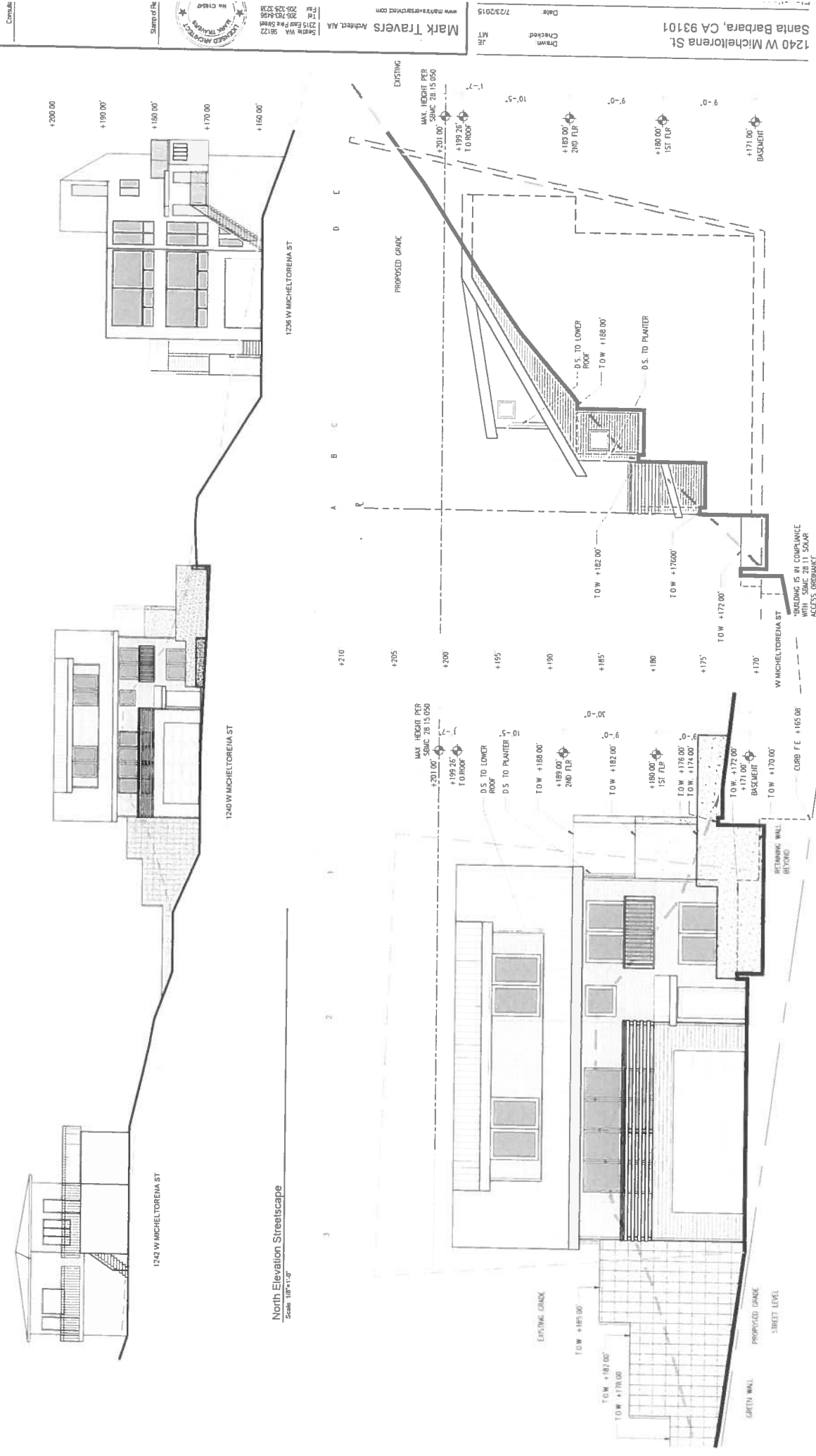


1 Section A
Scale: 1/4"=1'-0"



2 Section B
Scale: 1/4"=1'-0"





1240 W Micheltorena St
Santa Barbara, CA 93101

Drawn:
Checked:
Date: 7/23/2015

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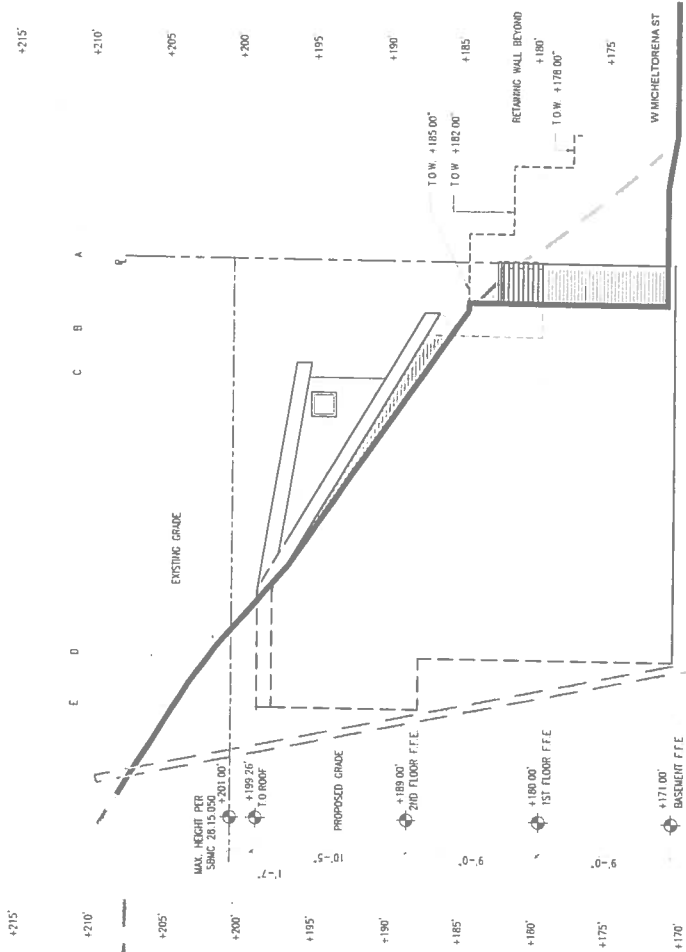
Seattle, WA 98122
205 103 4466
205 125 2726

SEATTLE MOVING CO
Mark Travers
No. 01542

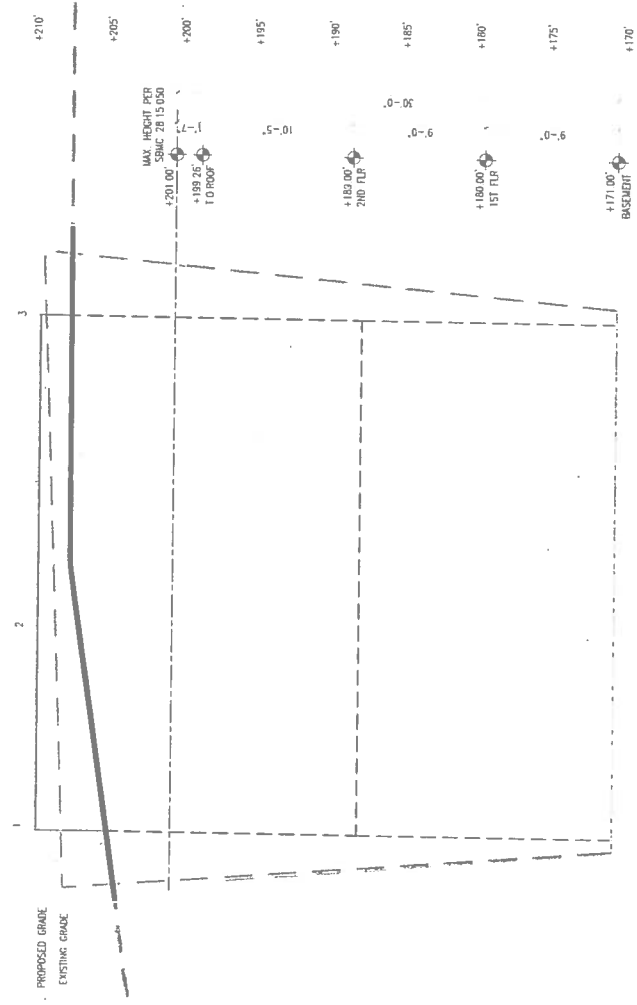
State of WA
Contract

Submitted / Revised

3 East Elevation
Scale: 1/4"=1'-0"



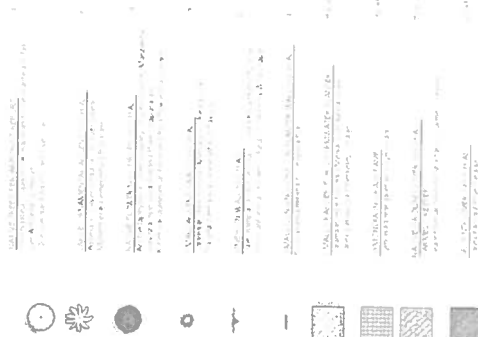
4 South Elevation
Scale: 1/4"=1'-0"



INSPIRATION



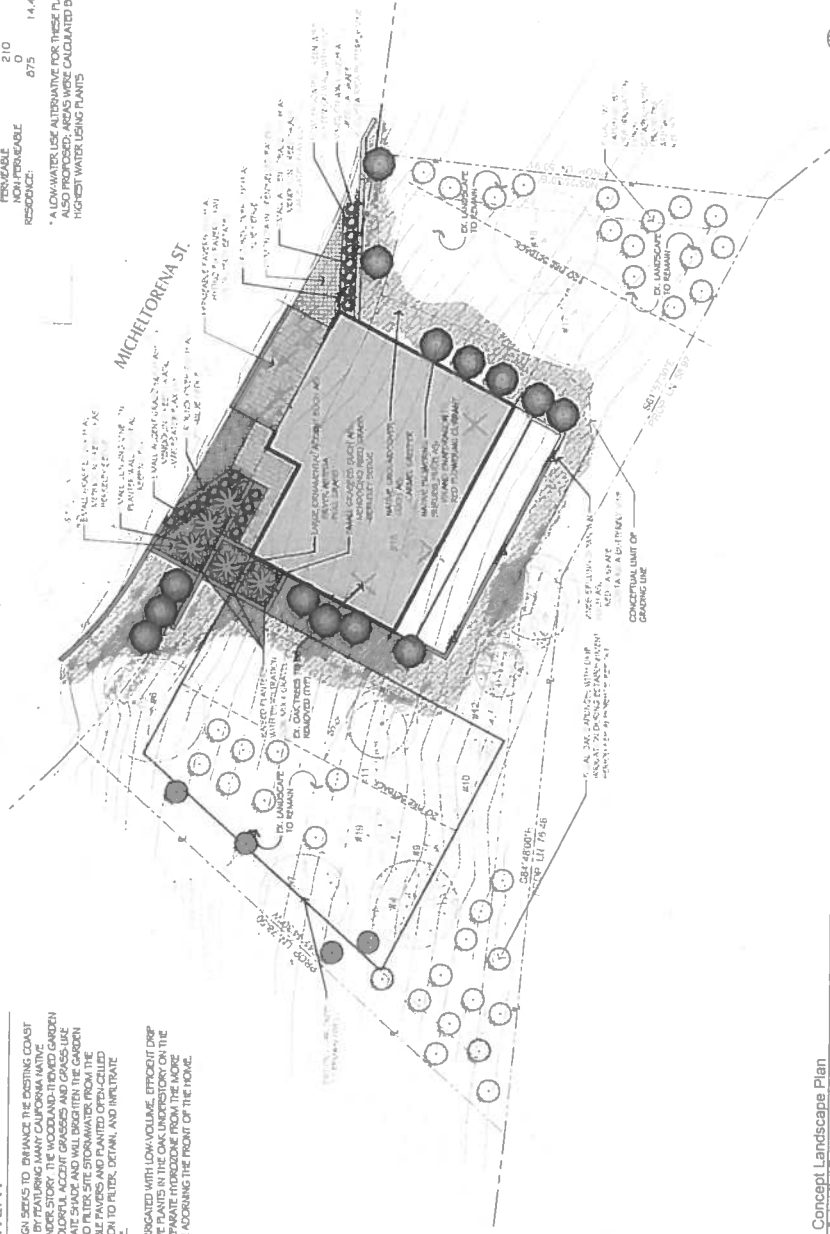
CONCEPT PLANT SCHEDULE

[illegible]

THE LANDSCAPE DESIGN SEVES TO ENHANCE THE EXISTING COAST PLANT OAK WOODLAND BY INTRODUCING MANY CALIFORNIA NATIVE PLANTS WITHIN THE UNDER STORY. THE WOODLAND-LOVED GARDEN IS HIGHLIGHTED BY COLORFUL ACCENT GRASSES AND GRASSES LIKE PLANTS WHICH TOLERATE SHADE AND WILL GROW IN THE GARDEN WHILE FUNCTIONING TO FILTER SITE STORMWATER FROM THE ROOFS. THE PERMEABLE PAVING AND PLANTED OFF-CURB PAVINGS ALSO FUNCTION TO FILTER, DETAIN, AND IMPROVE STORMWATER ON SITE.

THE PLANTS WILL BE IRRIGATED WITH LOW-VOLUME, EFFICIENT Drip Irrigation. THE NATIVE PLANTS IN THE OAK UNDERSTORY ON THE SLOPE WILL BE IN A SEPARATE HYDROZONE FROM THE MORE DESIGNED LANDSCAPE ADJACENT THE FRONT OF THE HOME.

LOT SIZE:		PERCENT COVER	
LANDSCAPE AREA:	6,096	100%	
NEW LOW WATER USE:	5,013	82.2%	
NEW MODERATE WATER:	1,253	20%	
EX. UNIRRIGATED:	60"	1%	
PAVING:	3,700	74%	
PERVEABLE	210	3.4%	
NON PERVEABLE	0		



Concept Landscape Plan
Scale 1/8" = 1'-0"

Mark Travers

July 22, 2015

Architect

City of Santa Barbara
Planning Division
630 Garden Street
Santa Barbara CA. 93101

RECEIVED
AUG 25 2015

CITY OF SANTA BARBARA
PLANNING DIVISION

Attn: Staff Hearing Officer

RE: 1240 W. Micheltorena, Santa Barbara, CA 93101

Subject: DART Application: Not required but mandatory
Request for Modification setback per SBMC 28.15.060 (setbacks),
SBMC 28.92.110.2 (findings for setback modification)
SBMC 28.15.060 C. open yard, and SBMC 28.87.170 retaining walls.

Dear Sir or Madam:

Please accept this letter on behalf of the project applicant as part for the DART application and as a formal request for Staff Hearing Officer approval of modifications listed above.

Site Description:

The site, located at 1240 W Micheltorena St., is a vacant 6,098 sf lot located in an R-1 single family zone in a Hillside Design District. The adjacent properties to the west, east and north are also zoned R-1, while the south abutting property is A-1. The site is configured in plan with a "delta" shaped property line to the south and a large radius property line to the north, defining the edge of the right of way. The west property line is almost orthogonal to the northern intersection, while the eastern property line is somewhat oblique. The most striking aspect of the site is the steep slope, which exceeds 70 percent. The toe of the slope is located in the right of way and varies from 8' to 10' in depth.

Site History:

The site has had several land use applications in past years, with a setback modification granted to former owner Ed Beck in 1963. More recently, the site was the subject of an application from early 2000, through late 2004 for Kathy Hahn. The city of Santa Barbara has consistently stated in public records that the site is a legal building site.

After meeting with the City of Santa Barbara development staff for an MOD & PSP Pre-

206 / 763-8496 P
206 / 328-3238 F

Why Too Que
Building
2315 E. Pike Street
Seattle, WA 98122

marktraversarchitect.com

EXHIBIT C

Application Consultation (PRE2014-00507), and reviewing the history of applications, it seems clear that the following concerns regarding previous applications that were consistently raised by staff, the design review board, and neighbors are as follows:

1. Building Height: (apparent height) was the most significant issue of concern along with bulk and scale.
2. Grading: the volume of grading initially proposed in past applications was approximately 3000 cubic yards and caused the area of disturbance to spread vertically and horizontally across the site.
3. Existing Trees: a consensus was reached that the existing on site oak trees should be preserved to the maximum extent possible.
4. Drainage and Erosion: concerns were brought up regarding drainage and erosion on and off site.
5. Vehicular Access: Concerns regarding vehicular access (e.g.: sightlines).

Project Description:

The proposed structure is a 2011 sf single family residence with attached 2 car garage.
1st floor 492 sq.ft. garage, 273 sq.ft. living
2nd floor 637 sq.ft. living 179 sq.ft. deck
3rd floor 609 sq.ft.

R-1 Hillside Design Zone.

The building footprint of 940 sf equals 15.41% of the total lot coverage of the 6,098 sf lot (0.14 acres). Floor Area Ratio is 74% of the maximum allowed.

Proposed Excavation: 952 cu. yds. cut on site +
40 cu. yds. cut off site = 992 cu.yds. total

Proposed oak tree removal/replacement:	5 trees to be removed off site
	3 trees to be removed on site
	40 saplings to be planted on site.

There are currently no structures on the site. As mentioned above the main issues concerning the project are building height, grading and preservation of the existing on-site trees. These concerns have been addressed in the design of the building and discussed in the setback modification proposal below. As required, the building will have fire sprinklers.

This project requires 3 modifications. Please consider the modification requests outlined below:

Setback Modification Proposal SBMC 23.15.060:

The proposed front setbacks were arrived at by determining how a proposed design could integrate into the hillside with the least amount of shoring/grading and general disturbance to the site, while also minimizing the apparent height and bulk of the proposed structure. The massing and general configuration are very similar to the adjacent building at 1236 W. Micheltorena; a property that features landscaping and retaining walls that encroach into the front yard setback to the property line.

The proposed front setback for the garage is "zero" feet per the review from the transportation department. The living space is proposed with a front setback of 5'-0" at the basement level and first floor. The second floor is proposed with an 8'-0" front setback.

The proposed setback modification meets the spirit and intent of the single family design guidelines. The proposed building steps back and up the site in a sympathetic manner that reflects the challenging condition of the site, while minimizing the apparent height and bulk of the structure and maximizing the existing tree preservation.

The topography of the site greatly favors a reduced setback for the building. If the required setbacks are implemented it would result in a strangely recessed building, and would impact the existing trees and hillside as an unintended consequence of code compliance.

Open Yard Modification Proposal SBMC 28.15.060 C:

The Santa Barbara single family design review board (SFDRB) indicated a preference to remove a previously proposed roof deck in it's first review cycle. In the second review cycle the roof deck was indeed removed from the proposal. This resulted in support from the SFDRB on January 26, 2015 but left the project with no option but to seek a modification for the minimum of 160 sq.ft. of useable open space that is both contiguous and level. This requirement can be substantially met by aggregate areas on site used as planting areas which yields approximately 134 sq.ft. There is also a patio on the first floor that could contribute another 100 sq.ft.

Retaining Wall Modification Proposal SBMC 28.87.170

Proposed retaining wall heights are as follows: approximately 14' high in the east side yard and approximately 18' in the west side yard, both conditions step up the hillside. The maximum height allowed by the code is 8' high.

Geotechnical

A soils investigation report and onsite infiltration report dated December 9 2014 and December 12 2014 respectively; both were prepared by Braun and Assoc. Inc. and are included here.

The geotechnical report included 3 test boring locations on the site which were driven to refusal. The borings indicate silty sands of between 3 to 5 'in depth and bedrock below. This bedrock is very stiff material which has good bearing capacity and vertical stability when cut. The geo-tech report offers recommendations for foundations, temporary cuts, permanent cuts, and drainage. There is also a section regarding slope stability analysis, and pile capacity.

The onsite percolation test was performed in two locations and revealed a percolation rate of ½-inch per hour.

The geotechnical information has been reviewed by Robert Pride P.E. along with the proposed excavation plan and permanent retaining walls as well as the building foundations. Mr. Pride has also reviewed the Preliminary Storm Water Drainage Analysis and Post-Project Storm Water Drainage Exhibit prepared by Flowers and Associates, Inc. The review letter is signed and stamped, and dated March 11 2015 and is attached to this application.

Further Geotechnical work has been performed in response to the PRT letter. Earth Solutions prepared the supplemental analysis which includes a review of the previous reports (2) and review letters. The Earth Solutions report features site stability analysis for the existing site the proposed excavation sequence followed by the completed project.

Utilities:

The site will be served by the city of Santa Barbara for sewer and water and garbage/recycling. Natural gas and electrical service will be provided by the local utility companies.

Off site improvements:

A joint meeting between the city of Santa Barbara planning staff and the transportation department was held in January of 2015. At that meeting it was agreed that the road surface on W .Micheltorena Street must be increased to a minimum of 20 feet along the N. property line of the project site. This work is in addition to the sight triangles that are already planned for, and expressed within the proposed drawings.

Site access and staging during construction:

W. Micheltorena will maintain a 16' clear width road surface during construction

Temporary erosion control measures are as follows:

Existing trees will be protected.

A silt fence will be constructed at the north property line.

A stabilized construction access area will be provided.

During a storm, a silt fence and straw bales will be placed at the north property line to intercept and direct storm drainage toward the concrete gutter adjacent to the site. Filter fabric will be placed into the nearest catch basin downstream. Any backfill material on site will be covered with plastic sheeting.

The site will be excavated from the top of the cut down. This method will be accomplished in 6-8 foot vertical sections. The exposed vertical surface will receive an engineered shotcrete application (3" thick) to stabilize the face of the cut. Equipment on site during the excavation process will be restricted to a small back hoe and a 10 yard dump truck working only during the course of construction and will adhere to the City of Santa Barbara approved hours of operation. An activity schedule is included in the drawings. The excavation process will generate approximate 90 truck trips. The destination of the exported material is yet to be determined. Please see the review letter from the geotechnical consultant regarding proposed excavation sequencing and monitoring.

As the site is excavated, the construction staging area will be transferred from the street side of the site into the footprint of the site. Construction workers will be ferried to the site from a collection point. Material deliveries and storage will occur at the footprint of the building. A construction activity schedule is included in the drawing set.

A back hoe and 10 yard dump truck will be on site for trenching and fine grading activity. After completing the excavation and grading, the foundation work will commence, using labor and hand tools. A concrete truck and pump will be used for a short period of time. Following the completion of the foundation, the retaining walls and flat work will follow, using concrete trucks and a concrete pump. Framing will commence directly after the concrete work. Hand tools will be used with material deliveries arriving on a regular basis. This same pattern will continue throughout the project as trades move onto the site to complete their respective work. The construction process is expected to take approximately 9 months.

Material and equipment will be stored on site in the footprint of the building and along the street frontage where the sight triangles will be located. Once framing begins, the garage will serve as the storage area.

Construction trades will be directed to park near the intersection of Fellowship Road and Kenwood road. A designated vehicle will ferry the workers to the site as necessary. Traffic control measures include cones at the northern property line which will act as traffic calming measure as well as the defining elements for the 16' minimum roadway width.

Construction Activity Schedule

1240 W. Micheltorena

Time Work to be performed **36 week construction schedule.** PHASE I

Pre-Construction meeting w/ City of SB

4 days *Site clearing* (includes grubbing, stump removal, **selective tree removal**, shrub removal and other underbrush, installation of gravel construction entrance) no existing structures on site. *Temp. power and water installed*

45 days *Excavation and utilities location* includes:

- mass excavation of site

Geotech Inspection: Observe and monitor excavation.

Geotech Inspection: Monitor slope stability

- removal of cut/backfill soil to off-site location. Export.

**Cut 952 cubic yards on site, Cut 40 cubic yards off site.
Stockpile 50 cubic yards on site for backfill.**

Export via 10 yard truck at an average of 3 truck trips per day.

- installation of temporary erosion control and traffic controls
- installation of shotcrete walls at excavation
- installation of storm drainage sub grade preparation
- installation of construction fence at boundary of excavation
- installation of filter fabric fence at downhill slopes

Geotech Inspection: Observe and monitor excavation.

Geotech Inspection: Erosion control.

Geotech Inspection: Monitor slope stability.

- fine grading and trenching

Geotech Inspection: Soil bearing verification of 2000 psf.

21 days *Foundation work* includes:

- forming and pouring of footings, slab-on-grade and retaining walls
- waterproofing of foundation walls and drainage plumbing.

7 days *Site backfill and permanent erosion control* includes:

- backfill against foundation walls
- installation of sod, rockeries and/or keystone walls (per code)

Geotech Inspection: Subsurface drainage installation.

Geotech Inspection: Backfill for rockeries and basement walls.

11 weeks TOTAL EXCAVATION AND SITE WORK

Equipment on site: (1) 10 yard dump truck, (1) rubber tired back hoe (1) 10 yard concrete truck and shotcrete equipment, delivery trucks as needed. Equipment on site will alternate according to task.

Vertical Construction

8 weeks-framing

2 weeks-for roofing and waterproofing

1 week-door and window installation, begin electrical and plumbing rough in.

4 weeks-siding, trim, gutters and downspouts complete electrical and plumbing rough in.

1 week -insulation

4 weeks-sheetrock

1 week- interior and exterior paint

2 weeks-millwork installation, cabinets Landscape and exterior electrical and plumbing trim.

1 week-electrical and plumbing trim out

1 week-for punch list finish floor installation and appliance installation

25 weeks total

Post construction final grades

Site triangles and a driveway are proposed, per city of Santa Barbara requirements. Retaining walls are planned on site and off site to allow access and appropriate sight distances for motor vehicles exiting the garage. The retaining walls as proposed are independent from the structural system of the proposed single family residence.

The final width of the road surface will be 20'-0" at the conclusion of construction.

Surrounding adjacent land uses:

The site is located within a single family zone R-1. All of the uses are residential.

Proposed building:

The building will feature exterior lighting. The light fixtures will be shielded and low wattage luminaires are specified. The project as envisioned will not generate odors, smoke or any other toxic fumes. The only source of noise generated by the construction activity will be from construction equipment and power tools.

Tree preservation:

There are 3 trees on site and 5 trees off site that are proposed to be removed. The arborist's report indicates that tree pruning and protection must be implemented for the remaining trees. The arborist also recommends that 40 California Oak saplings be planted during the final grading/landscaping portion of the project. The final landscape plan will include a small area at the north side of the site combined with onsite drainage facilities and drought resistant plantings. The existing California Oaks will remain and will be maintained. **Please see the addendum to the arborist's report dated July 22 2015.**

Storm Water Management: Tier 3

The proposed area of impervious surface is 1,085 sq.ft. on site. The site is subject to the Tier 3 requirements.

Flowers and Associates, Inc. have been contracted to produce the Preliminary Storm Water Drainage Analysis and preliminary design for compliance with the city's storm water requirements for this site. The storm water design as proposed begins with the roof drainage which is conducted to planters on the west side and open-celled pavers on the east side of the building. These act as a bio-filters and discharge into lower planters and media with the same characteristics. The planters and the permeable/open-celled pavers are designed to filter as well as allow infiltration. Once the discharge leaves the planters on the west side, it is conducted away from the planters into pervious paving that also has storage capacity below it. Infiltration is the last stage of the management plan.

Please see the Preliminary Storm Water Drainage Analysis and schematic drawings prepared by Flowers and Associates, Inc.

Hazardous Materials:

There are no known hazardous materials on site.

In conclusion. I would like to thank the City of Santa Barbara planning staff and the appointed members of the SFDRB for their support and guidance on this challenging project. Much work has been done to date with a team of professionals that have carefully considered the design and development challenges of this particular and unique site. Thanks in advance for your continued guidance and support.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. Travers', with a stylized, cursive script.

Mark Travers, AIA

Attachments: Architectural Plan Set
Landscape Plans
Storm Water Management Plan
DART SWMP Checklist
Arborist Report
Geotechnical Report by Braun & Associates
Geotechnical Letter by Robert Pride P.E.
Previous Pre-app Letter dated June 2, 2014
Site Photographs
Title Report

OAK TREE ASSESSMENT AND PROTECTION PLAN: 1240 West Micheltorena, Santa Barbara

October 8, 2014

Mark Travers
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Prepared by:
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SUMMARY

The property owner at 1240 West Micheltorena is proposing to build a single family residence on the site. The property is steeply sloped with nineteen oak trees within and adjacent to the proposed structure.

I was retained by the architect, Mark Travers, to assess potential impacts to the oaks and prepare a report with my findings and recommendations.

Due to the terrain and very limited area, significant amounts of excavation will be required for this project. Eight oak trees will need to be removed and a ninth should be considered for removal due to its fractured root ball and lean onto the utility wires.

The remaining oaks are an adequate distance from the project and should not be subjected to any significant impacts. The eight removed oaks should be mitigated by planting forty 5-gallon saplings on the property and on the adjacent, upslope woodland.

The Tree Protection Measures in this report and on the site plan will minimize any impacts to oaks. The Table of Contents on the next page illustrates the organization of this report.

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BACKGROUND/ASSIGNMENT

A new residence is planned for the subject property. There are nineteen oak trees within the project parameters. I was retained by the architect, Mark Travers, to assess the trees and the site, evaluate potential impacts to the trees, and prepare a report with my findings and recommendations. I was out performing my site work on October 6, 2014.

PROJECT DESCRIPTION

In order to fulfill my assignment, the following elements were required:

1. Inventory the trees and compare with the site plan,
2. Assess the condition of the trees,
3. Draw the critical root zones on the site plan,
4. Assess potential impacts from excavation and construction,
5. Develop tree protection measures,
6. Prepare the report and corresponding site plan.

OBSERVATIONS

1. The proposed project is planned on a steeply sloped lot.
2. The lot is covered with oak trees, leaf litter, vines, and other ground cover.
3. The trees are all unmanaged and are in fair condition for a woodland. Vines grow through many of the crowns, deadwood is plentiful, and tree structure is affected by competition of adjacent trees within a small area.
4. The soil has sloughed down the slope and is raised against the root crowns of most trees on the up-slope side of the trunk.
5. There are nineteen California Live Oaks (*Quercus agrifolia*) within the parameters of construction.
6. Individually, each oak has a somewhat defective form when compared to an oak growing in a small managed cluster.
7. There is one oak close to the road (#6) that appears to have uprooted but settled. The root ball is fractured and a large limb is against the low voltage wire.
8. Due to the limited area and steep terrain, five trees will need to be removed for the project.
9. Based on the site plan, the critical root zones of four oaks will be minimally encroached upon without significant impact.
10. The limited size of the lot, narrow road to the property, and the steep terrain will make construction challenging.
11. The five trees along Micheltorena Street are in the city right of way.

TREE INVENTORY

The nineteen trees in the table below can be found on the corresponding site plan. The column heading are described:

Tree #	DBH	CRZ	Condition	Comment	PPI
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Tree# corresponds with the site plan

DBH is diameter at breast height measured at 54" above ground, multi-trunk trees are represented with a "/" between each trunk. Sometimes the DBH is measured higher or lower than 54" due to bulges or limbs that exaggerate size.

CRZ is the critical root zone defined as 12" radius per inch of DBH. Note that the CRZ of multi-trunk trees is calculated from the DBH as the square root of the sum of the squares of each DBH.

Condition is good, fair, or poor and represents the health and structural condition. Unmanaged trees in a woodland condition are usually fair or poor.

Comment presents something significant about the tree or where it is located.

PPI is potential project impact.

The bold represents trees to be removed. Highlighted is a potentially hazardous tree.

Tree #	DBH	CRZ	Condition	Comment	PPI
1	14/8	16	Fair	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
2	6	6	Poor	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
3	8	8	Fair	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
4	10	10	Poor	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
5	14/8	16	Poor	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
6	18	18	Poor	Fractured root ball, leans on low voltage	Protect, but consider removal due to potential hazard
7	12	12	Fair	Along western property line	Protect
8	12/12	17	Fair	Top of lot, out of area	Protect

9	16	16	Fair	Top of lot, out of area	Protect
10	12	12	Fair	Top of lot, out of area	Protect
11	9/7	11	Fair	Less than 20% encroachment into CRZ, no significant impact	Protect
12	10	10	Fair	Top of lot, out of area	Protect
13	8/10	13	Fair	Less than 5% encroachment into CRZ, no significant impact	Protect
14	6/10	12	Fair	Middle of lot	In building pad-remove & mitigate with five, 5-gallon saplings
15	10/14/ 10/4/4 /8	22	Fair	Middle of lot	In building pad-remove & mitigate with five, 5-gallon saplings
16	13/6	14	Fair	Middle of lot	In building pad-remove & mitigate with five, 5-gallon saplings
17	22	22	Fair	Less than 20% encroachment into CRZ, no significant impact	Protect
18	16	16	Fair	Less than 5% encroachment into CRZ, no significant impact	Protect
19	6	6	Fair	Top of lot, out of area	Protect

CONCLUSIONS

- The terrain of this lot poses some significant challenges. The lot would not be build-able if trees were not removed.
- Eight oaks will be removed for this project.
- Forty 5-gallon oaks should be planted on site or in the adjacent woodland. These trees should be monitored and maintained for five years to assure survival.
- Tree protection measures must be followed to avoid significant impacts.
- The uprooted tree should be removed due to potential risks.
- Deadwood and weakly structured limbs around the house should be pruned to minimize risks.

TREE PROTECTION MEASURES

1. A pre-construction meeting shall be held with the project arborist and contractors, prior to commencement of work, to discuss tree protection measures.
2. Install fencing, as designated on the site plan, to establish tree protection zones (TPZ). These TPZs should be at the outside edge of work areas, around trees. Fences must be maintained in upright positions throughout the duration of the project.
3. The TPZs should be void of all activities, including parking vehicles, operation of equipment, storage of materials, and dumping (including temporary spoils from excavation). Due to the limited size of the site, planning is important prior to excavation to assure that all spoils and materials are stored outside of the TPZs.
4. All excavation and grading near trees should be monitored by the project arborist.
5. Any roots encountered during grading that are ½" and greater should be cleanly cut.
6. Tree pruning, where limbs may conflict with equipment and proposed structures, should be done prior to excavation and grading.
7. Pruning should be performed or supervised by a qualified Certified Arborist. The project arborist should review the goals with workers prior to commencement of any tree pruning. Tree workers should be knowledgeable of *ISA Best Management Practices for Tree Pruning*.
8. It may be determined by the project arborist that supplemental irrigation is necessary to aid trees that incur root loss and/or during hot and dry periods.

ARBORIST DISCLOSURE STATEMENT AND CERTIFICATION OF PERFORMANCE

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

I Bill Spiewak, certify:

That I have personally inspected the trees on the property referred to in this report and have stated my findings accurately.

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and commonly accepted arboricultural practices.

Signed:

Bill Spiewak

Bill Spiewak

Registered Consulting Arborist #381

American Society of Consulting Arborists

Board Certified Master Arborist #310B

International Society of Arboriculture



REVISION: OAK TREE ASSESSMENT AND PROTECTION PLAN: 1240 West Micheltorena, Santa Barbara

MAY 15, 2015

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SUMMARY

The property owner at 1240 West Micheltorena is proposing to build a single family residence on the site. The property is steeply sloped with nineteen oak trees within and adjacent to the proposed structure.

I was retained by the architect, Mark Travers, to assess potential impacts to the oaks and prepare a report with my findings and recommendations. This is a revision of an October 2014 report due to changes in the plan. However, there was a reduction in the size of the project and will have less encroachment into the critical root zone of one oak.

Due to the terrain and very limited area, significant amounts of excavation will be required for this project. Eight oak trees will need to be removed. Another oak along the road may need to be removed in the future due to its fractured root ball and lean onto the utility wires. However, this should be discussed in the future as it is not part of this application process.

The remaining oaks are an adequate distance from the project and should not be subjected to any significant impacts. The eight removed oaks should be mitigated by planting forty 5-gallon saplings on the property.

The Tree Protection Measures in this report and on the site plan will minimize any impacts to oaks. The Table of Contents on the next page illustrates the organization of this report.

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BACKGROUND/ASSIGNMENT

A new residence is planned for the subject property. There are nineteen oak trees within the project parameters. I was retained by the architect, Mark Travers, to assess the trees and the site, evaluate potential impacts to the trees, and prepare a report with my findings and recommendations. My initial report was prepared in October 2014. Since that time, the size of the structure has been reduced and I was asked to revise my report to reflect any changes. I was back at the site in early May 2015.

PROJECT DESCRIPTION

In order to fulfill my assignment, the following elements were required:

1. Inventory the trees and compare with the site plan,
2. Assess the condition of the trees,
3. Draw the critical root zones on the site plan,
4. Assess potential impacts from excavation and construction,
5. Develop tree protection measures,
6. Prepare the report and corresponding site plan.
7. Revise this report from the original.

OBSERVATIONS

1. The proposed project is planned on a steeply sloped lot.
2. The lot is covered with oak trees, leaf litter, vines, and other ground cover.
3. The trees are all unmanaged and are in fair condition for a woodland. Vines grow through many of the crowns, deadwood is plentiful, and tree structure is affected by competition of adjacent trees within a small area.
4. The soil has sloughed down the slope and is raised against the root crowns of most trees on the up-slope side of the trunk.
5. There are nineteen California Live Oaks (*Quercus agrifolia*) within the parameters of construction.
6. Individually, each oak has a somewhat defective form when compared to an oak growing in a small managed cluster.
7. There is one oak close to the road (#6) that appears to have uprooted but settled. The root ball is fractured and a large limb is against the low voltage wire.
8. Due to the limited area and steep terrain, five trees will need to be removed for the project.
9. Based on the site plan, the critical root zones of four oaks will be minimally encroached upon without significant impact.
10. The limited size of the lot, narrow road to the property, and the steep terrain will make construction challenging.
11. The five trees along Micheltorena Street are in the city right of way.

TREE INVENTORY

The nineteen trees in the table below can be found on the corresponding site plan. The column heading are described:

Tree #	DBH	CRZ	Condition	Comment	PPI
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Condition is good, fair, or poor and represents the health and structural condition. Unmanaged trees in a woodland condition are usually fair or poor.

Comment presents something significant about the tree or where it is located.

PPI is potential project impact.

The bold represents trees to be removed.

Tree #	DBH	CRZ	Condition	Comment	PPI
1	14/8	16	Fair	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
2	6	6	Poor	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
3	8	8	Fair	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
4	10	10	Poor	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
5	14/8	16	Poor	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings

6	18	18	Poor	Fractured root ball, leans on low voltage	To be discussed in the future with the city arborist as this is not part of the application
7	12	12	Fair	Along western property line	Protect
8	12/12	17	Fair	Top of lot, out of area	Protect
9	16	16	Fair	Top of lot, out of area	Protect
10	12	12	Fair	Top of lot, out of area	Protect
11	9/7	11	Fair	Less than 5% encroachment into CRZ, no significant impact	Protect
12	10	10	Fair	Top of lot, out of area	Protect
13	8/10	13	Fair	Less than 5% encroachment into CRZ, no significant impact	Protect
14	6/10	12	Fair	Middle of lot	In building pad-remove & mitigate with five, 5-gallon saplings
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16	13/6	14	Fair	Middle of lot	In building pad-remove & mitigate with five, 5-gallon saplings
17	22	22	Fair	Less than 20% encroachment into CRZ, no significant impact	Protect
18	16	16	Fair	Less than 5% encroachment into CRZ, no significant impact	Protect
19	6	6	Fair	Top of lot, out of area	Protect

CONCLUSIONS

- The terrain of this lot poses some significant challenges. The lot would not be build-able if trees were not removed.
- Eight oaks will be removed for this project.
- Forty 5-gallon oaks should be planted on site. These should be planted in clusters of five so over time, the best in each cluster is retained to eventually replace the five trees that are removed. If more than five trees develop into spaces where they do not conflict, more than one tree in each cluster may be retained. These trees should be monitored and maintained for five years to assure survival.
- Tree protection measures must be followed to avoid significant impacts.
- The uprooted tree should be looked at in the future and removed as per review by the city arborist.
- Deadwood and weakly structured limbs around the house should be pruned to minimize risks.

TREE PROTECTION MEASURES

1. A pre-construction meeting shall be held with the project arborist and contractors, prior to commencement of work, to discuss tree protection measures.
2. Install fencing, as designated on the site plan, to establish tree protection zones (TPZ). These TPZs should be at the outside edge of work areas, around trees. Fences must be maintained in upright positions throughout the duration of the project.
3. The TPZs should be void of all activities, including parking vehicles, operation of equipment, storage of materials, and dumping (including temporary spoils from excavation). Due to the limited size of the site, planning is important prior to excavation to assure that all spoils and materials are stored outside of the TPZs.
4. All excavation and grading near trees should be monitored by the project arborist.
5. Any roots encountered during grading that are ½" and greater should be cleanly cut.
6. Tree pruning, where limbs may conflict with equipment and proposed structures, should be done prior to excavation and grading.
7. Pruning should be performed or supervised by a qualified Certified Arborist. The project arborist should review the goals with workers prior to commencement of any tree pruning. Tree workers should be knowledgeable of *ISA Best Management Practices for Tree Pruning*.
8. It may be determined by the project arborist that supplemental irrigation is necessary to aid trees that incur root loss and/or during hot and dry periods.

ARBORIST DISCLOSURE STATEMENT AND CERTIFICATION OF PERFORMANCE

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

I Bill Spiewak, certify:

That I have personally inspected the trees on the property referred to in this report and have stated my findings accurately.

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and commonly accepted arboricultural practices.

Signed:

Bill Spiewak

Bill Spiewak
Registered Consulting Arborist #381
American Society of Consulting Arborists

Board Certified Master Arborist #310B
International Society of Arboriculture



ADDENDUM TO: OAK TREE ASSESSMENT AND PROTECTION PLAN
Project site: 1240 West Micheltorena, Santa Barbara

July 27, 2015

Mark Travers
2315 E Pike Street
Seattle WA 98122
(206) 763-8496 x 105
www.marktraversarchitect.com

RECEIVED
AUG 25 2015

CITY OF SANTA BARBARA
PLANNING DIVISION

Prepared by:
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Registered Consulting Arborist #381
American Society of Consulting Arborists

Board Certified Master Arborist #310B
International Society of Arboriculture

3517 San Jose Lane, Santa Barbara, CA 93105
(805) 331-4075 / bill@sbarborist.com

BACKGROUND & ASSIGNMENT

In October 2014, I prepared an Oak Tree Assessment and Protection Plan for the subject property. Since that time, the Planning Department of the City of Santa Barbara reviewed the report and expressed concerns about the mitigation of the eight oaks that are proposed to be removed. The concern was that mitigation tree size, placement, and restoration of bio-mass in a reasonable amount of time would not be adequate. The fire department also expressed concern about planting oaks within 20' of the house. On July 21, 2015 I returned to the site with Landscape Architect Kim True of True Nature, to discuss and address the concerns. I was assigned to present my findings in a report.

OBSERVATIONS

As reported in the original report, eight oaks will be removed for the project. The oaks to be removed are identified in the tree inventory as shown below (same as in original report). Note that three of the trees are in poor condition and the others are in fair condition. Most of the trees are small or a bit larger due to multiple small trunks. The trees and canopies all grow to the north.

Tree #	DBH	CRZ	Condition	Comment	Potential Project Impact
1	14/8	16	Fair	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
2	6	6	Poor	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
3	8	8	Fair	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
4	10	10	Poor	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
5	14/8	16	Poor	overhangs road	In city right of way and driveway pad-remove & mitigate with five, 5-gallon saplings
14	6/10	12	Fair	Middle of lot	In building pad-remove & mitigate with five, 5-gallon saplings
15	10/14/10/4/4/8	22	Fair	Middle of lot	In building pad-remove & mitigate with five, 5-gallon saplings
16	13/6	14	Fair	Middle of lot	In building pad-remove & mitigate with five, 5-gallon saplings

ANALYSIS & CALCULATIONS

When looking upward through the tree crowns, the canopy of oaks proposed to be removed, covers the approximate footprint of the house and a portion of the road. [See site plan section at end of report]. Note that the dashed lines around the trees on the site plan represent the calculated critical root zones (CRZs) and not the drip lines, which are less than the CRZs. In addition, the trees lean northward and the canopy covers are not equidistant around the center of the trees. There are also gaps in the canopy cover between northward leaning oaks and the overhead utility wires.

In order to calculate the approximate area of the canopy cover of the proposed oak removals, I measured the underlying building footprint and road. This calculates to an area of 2000 sq' (40' x 50').

I calculated the canopy cover of a 5-gallon oak with a 2' spread or 1' radius as 3.14 sq' ($1' \text{ radius}^2 \times 3.14$). With supplemental irrigation, I anticipate that a 5-gallon tree canopy will increase 2' per year (1' radius) after the first year of planting. Over five years, the total spread or canopy cover will be 10' (5' radius) or 78.5 sq' ($5' \times 5' \times 3.14 = 78.5 \text{ sq.' per tree}$). If forty, 5-gallon saplings survive, the canopy cover over five years will be approximately 3,120 sq', or almost 1.5 times the area of canopy cover at the current time. With a 62.5% success rate (twenty-five live trees) the canopy cover will be restored in five years. Note that this is not a restoration of height.

Irrigated oaks have a very high success rate, if managed, and it is more likely that trees will grow larger than anticipated in the five years. It is also known that smaller oaks adapt to woodland conditions better than 15 gallon oaks due to better conditions for growth of the tap root.

In addition, the landscape architect has revised her plan and relocated the trees at least 20' from the structure as requested by the fire department.

CONCLUSIONS

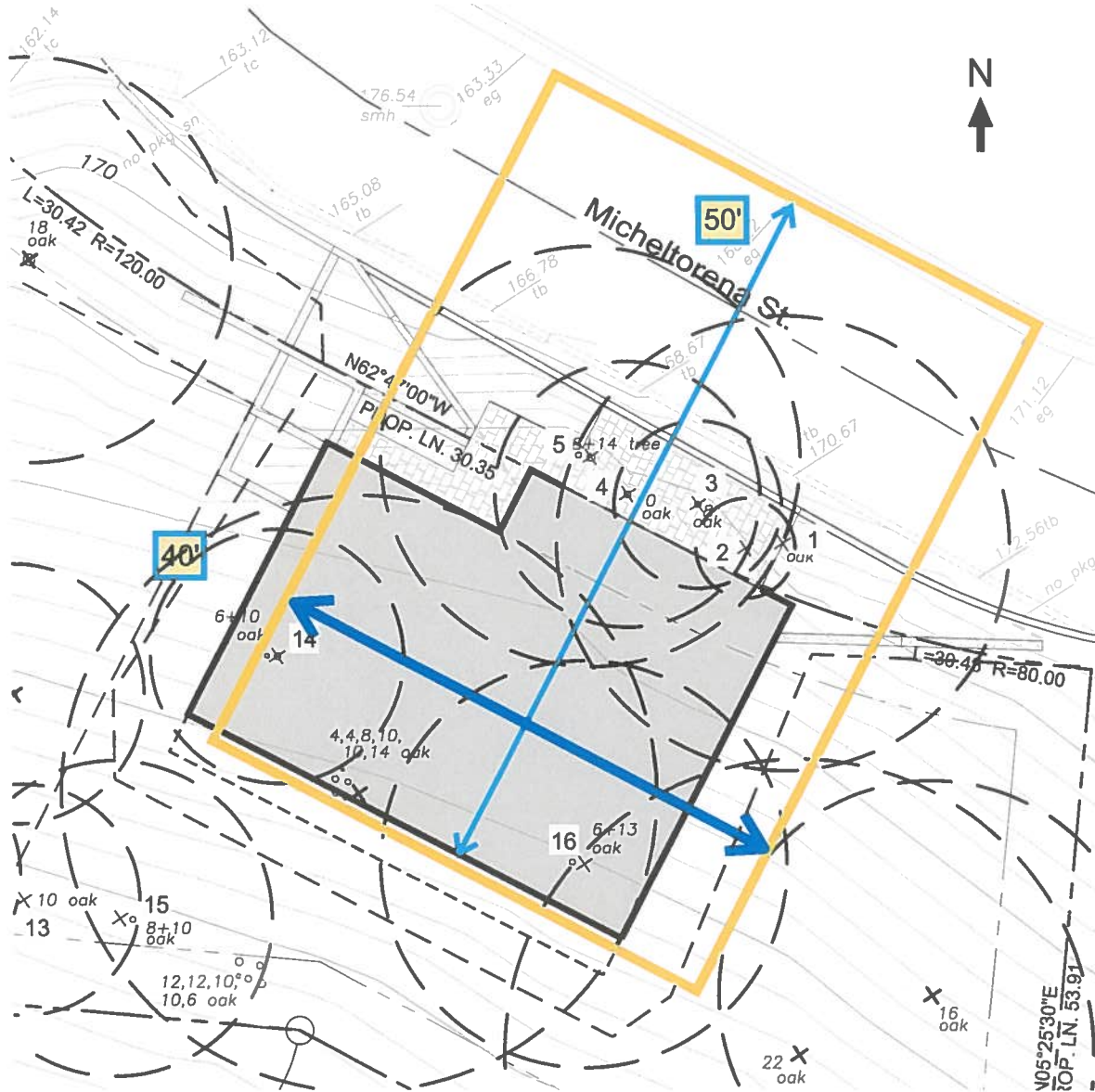
1. Based on the existing condition and coverage of the oaks and the approximate rate of growth of five gallon oaks, the loss in canopy cover should be restored within five years. This is not the same as trunk diameter and height.
2. Relocation of the trees, 20' from the structure, will satisfy the fire department.
3. Due to conditions on the site (slope and soil), 5-gallon trees will better adapt than 15-gallon trees.

Please contact me with any questions.

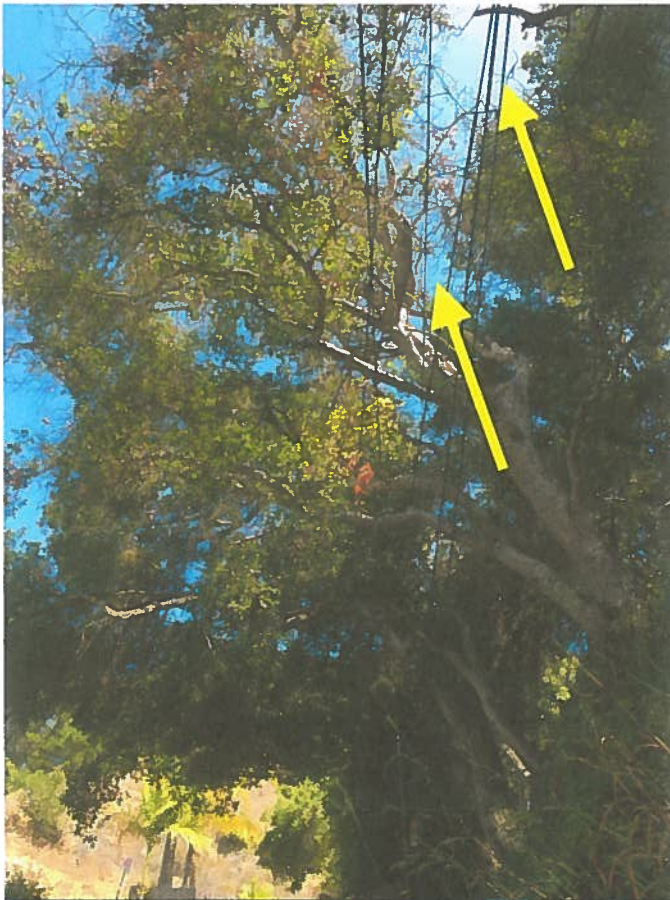
Signed: Bill Spiewak
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A section of the site plan shows the length and width of the house and road that correspond with the canopy cover of the proposed trees to be removed (2000 sq'). There are some gaps in the canopy cover and more growth to the east. However, the area in yellow is a close approximation to what exists. See the revised Landscape Architecture plan for the approximate locations of new five gallon oaks.



Upper left: Note a gap in the canopy cover above the wires.

Upper right: Arrows point to declining oak #4 where bark has fallen off trunk.



Left: Note the dieback in the crown of oak #5.

March 10, 2015

Mr. Mark Travers AIA
2315 East Pike Street #A
Seattle, WA 98122

Re: **Geotechnical Recommendations**
Proposed Residence
1240 West Micheltorena Street
Santa Barbara, California

Dear Mr. Travers,

At your request I have reviewed the proposed site development plan for the proposed residence to be constructed on the south side of Micheltorena Street in Santa Barbara. It is understood that onsite storm water from roof areas will be collected for discharge into the pervious planter box installations, and that permeable pavers will be installed along the front of the residence.

A recent geotechnical report by Braun Associates dated December 9, 2014 was used as a reference for my assessment of the proposed drainage improvements and geologic site conditions on this property. This report confirms that the site is underlain by an upper layer of silty sands and gravels that overlie dense sands, gravels and cobbles. These soils are suitable for onsite infiltration, and in my opinion they will not cause slope instability problems where storm water is discharged into the proposed planter boxes. In addition, the permeable pavers will also slowly discharge water into the underlying sandy soils.

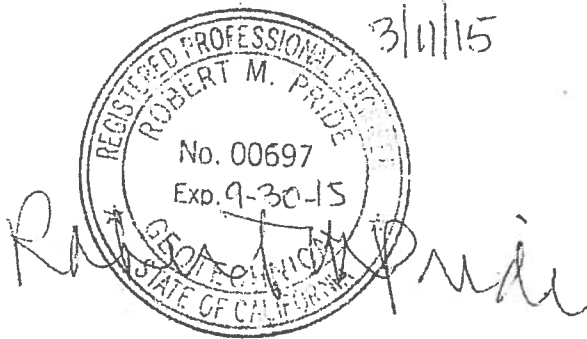
Temporary slope excavations will be required to establish building pad grades on this site. It is understood that these temporary slopes will be made at a 5V:1H gradient down to elevation 170 feet, and that they will be covered with a 3" thick continuous application of shotcrete placed in 8 to 10 foot vertical intervals. This shotcrete should be anchored into the slope with reinforcing steel (#4 bar 48" long @ 36" O.C. each way) to maintain stability during construction of the residence. All temporary excavations should be monitored by an engineering geologist to confirm stability of these slopes, and field memos should be provided to summarize the exposed soil and bedrock conditions encountered during slope excavation.

Temporary erosion control installations will also be required to control surface water runoff during rainstorm events. Silt fencing should be installed along the lower portion of this property to limit offsite sediment discharge and erosion along Micheltorena Street, and this installation will be confirmed with an appropriate field memo.

Excavation for the proposed foundations will also be inspected to confirm suitable bearing soils and/or bedrock conditions as anticipated from the geotechnical boring logs that describe conditions on the upper portion of this site. A field memo will be provided that covers this inspection of the footing excavations for the new residence.

Additional field inspections will be made to document subsurface drainage installations around the perimeter of the residence foundations, and placement of backfill against the basement retaining walls and behind proposed rockery walls. Again we will provide field memos for this work onsite.

Respectfully,



Robert M. Pride, P. E. G.E
Principal Geotechnical Engineer

dist: (1) Addressee

rmp: TraversMicheltorena1



SOILS INVESTIGATION

PREPARED FOR:

Mr. Mark Travers
2315 E. Pike Street
Seattle, WA 98122

Proposed Single Family Residence,
1240 W. Micheltorena Street, Santa Barbara, CA

December 9, 2014

W.O.#2622

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Field Exploration
Laboratory Tests
Seismic Design Criteria

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ENCLOSURES

Slope Stability Analysis
Pile Capacity Chart

INTRODUCTION

This investigation was requested by Mr. Mark Travers, Architect for the project, and is based on our written agreement dated September 19, 2014. This report presents our findings and recommendations for the proposed swimming pool and accessory structure. The project is located at 1240 W. Micheltorena Street in the City of Santa Barbara, California. A plot plan of the site is shown as Plate A-1.1.

SCOPE OF WORK

This investigation was conducted in order to determine the physical characteristics of the soils on the development site and to provide recommendations intended to comply with the considerations for the current California Building Code 2013 Edition and ASCE/SEI 7-10 Minimum Design Loads for Buildings & Other Structures. The recommendations are intended to comply with portions of Chapter 16 & 18, Appendix J of the CBC 2013 Edition and Chapters 12, 16 & 21 of the ASCE/SEI 7-10. More specifically the scope of our investigation includes the following objectives:

- Evaluation of the existing surface and subsurface conditions, including soil and ground water within the area of the construction.
- Foundation recommendations for the proposed multi-story single family residence..
- Geotechnical design properties for site and restrained retaining walls.
- Infiltration analysis and recommendations.
- To present general recommendations concerning construction procedures and quality control measures related to this project.

SITE CONDITIONS

This parcel is located at the end of West Micheltorena overlooking the City of Santa Barbara proper. The site rests on the north facing slope of Alta Mesa Hills. Homes in this area generally consist of multi-story custom residences with graded pads utilizing both site and restrained retaining walls. Grading is generally limited to small fill operations in order to provide level building areas. Newer structures in this area rest on deep foundation systems in order to comply with building code standards for foundation setback requirements.

The subject parcel is undeveloped and consists of a heavy growth of oaks and shrubs. Slopes on the property range from 50% to 100%. Surface drainage is sheetflow to Micheltorena Street.

The scope of this investigation does not include geologic or seismic studies for the site. Also, the assessment of general site environmental conditions or the presence of pollutants in the soils of the site is beyond the scope of this investigation.

Our recommendations are based on the results of our field exploration, laboratory tests and appropriate engineering analysis. The results of both field and laboratory work are presented in the Appendix. The recommendations provided herein are preliminary until they are confirmed in the field by the soils engineer during construction. It is the intent of this report that it be used by the design engineer in preparation of the plans and specifications. Application beyond the intent of this request is strictly at the user's risk. To verify that all pertinent issues here have been addressed and to insure conformance with the intent of this report, it is requested that final plans be submitted to this office for review and comment prior to submittal.

FIELD INVESTIGATION

Previous Soils Investigation was performed by Fugro West, Inc. This report dated October 12, 2004, Project 3411.001, provided recommendations for foundations and conventional retaining walls to support a single family residence. Our subsurface soil conditions were explored with three mobile auger rig borings extending up to a depth of 7 feet below present ground surface. Samples were obtained using the California Split Tube method. The borings were supplemented with one field density test.

Further details of our field exploration are presented in the Appendix.

LABORATORY TESTING

Laboratory tests were performed on selected soil samples to aid in the classification and determination of the engineering properties of the project soils. The following tests were performed:

- o Moisture Content (ASTM D2216)
- o Dry Density Determination (ASTM D2937)
- o Consolidation Characteristics (ASTM D2435)
- o Grain Size Distribution (ASTM D422)
- o Expansion Soil Index (ASTM D4829)
- o Maximum Density-Optimum Moisture Curve (ASTM D1557 Most Current)
- o In-Place Relative Density
- o Direct Shear Strength Determination (ASTM D3080)

Laboratory test results are presented in the Appendix.

LIQUEFACTION POTENTIAL

Liquefaction is the loss of strength of cohesionless soils (sandy soils) when the pore water pressure induced in the soil due to earthquake motions become equal to the confining pressure. The primary factors influencing liquefaction potential include depth of ground water, soil type, relative density of sandy soils, overburden pressure, fines content and the intensity and duration of ground shaking. Liquefaction potential is the greatest in saturated, loose, poorly graded, fine

sands with grain size (D50) in the range of 0.1 to 0.5 millimeters. Generally, the potential for liquefaction is not critical at depths greater than 40 feet. Due to the dense nature of the onsite soils and lack of perched water the potential for liquefaction should be considered low.

LATERAL SPREADING

Lateral spreading or flow slides are the lateral movement of soil to the unrestrained downhill side. This phenomenon known as flow slide or lateral spreading develops in areas subject to liquefaction. Flow slides occur in the same areas as those which are liquefiable. Lateral spreading requires saturated, uncompacted or slightly compacted artificial fills or loose saturated granular soils. Lateral spreading should be considered low for this project.

SLOPE STABILITY ANALYSIS

Our analysis was conducted utilizing GeoStudios™ Slope-W® software. Printout of static loading Factor of Safety can be found in the Enclosure. Our analysis was based on limit equilibrium method of analysis. This includes the Ordinary, Bishop and Janbu methods along with Morganstern-Price Method. Based on our analysis the static minimum Factor of Safety in all cases was greater than 1.5 while Factor of Safety for seismic was greater than 1.15.

SOIL CONDITIONS

The geotechnical engineering investigation for this project consisted of a program of field exploration, laboratory testing and engineering evaluation. The field and laboratory data generated for our evaluations are presented in the Appendix. Our description of the supporting soil and groundwater conditions is based on the results of the field and laboratory testing program. A summary of the soil conditions encountered within the area of the proposed project is as follows:

- Soils encountered on the site are part of the upper weathered remnants of the Santa Barbara Formation. These materials consist of dark brown to yellowish brown medium grained sands with slight silts. Weathered bedrock was encountered at the depth of 7 feet in all borings. Due to limited access borings were conducted by hand. Auger rejection using the hand digging equipment was encountered in all locations to the depth of 7 feet.

RECOMMENDATIONS

The understanding of this firm is that the proposed development will consist of a multi-story single family residence constructed into the existing slope. Due to this condition retaining walls on three faces will be required. The retaining walls are expected to range from 10 to 30 feet in height. The retaining wall system may either utilize a soil nail wall system with restraint extending into the native soils or a restrained soldier pile system utilizing the interior floor system as a structural diaphragm for restraint of the walls. Due to the location of the property lines on the site the use of an engineered diaphragm at the floor and roof system may prove to be the most economical and least obtrusive to neighboring properties.

Based upon this information the following is recommended:

FOUNDATIONS

For restrained or partially restrained retaining walls, which form portions of the foundation system or are attached to permanent structures, the following recommendations are given:

1. Retaining walls shall be designed assuming an active soil pressure equivalent to a fluid whose weight is 60 pounds per cubic foot. This value shall be increased for surcharge backfill by 1 pound per cubic foot for each degree of slope angle over 12°. Resistance to the lateral pressure a passive soil pressure equivalent to a fluid whose weight is 350 pounds per cubic with a minimum resisting pressure of 4500 psf.
2. Retaining walls shall be serviced by a subdrain placed a minimum of 12 inches below interior slab grade. Surcharge loads, which will affect the loading on the wall, should be considered to be within a projected 1^H:1^V line extending upward from the inside base of the wall.
3. Support of foundation walls vertically shall utilize a caisson system which can also act as a lag pile restraint during initial construction excavations. Pile capacity chart is included in this report as Enclosure A.
4. All caissons shall be designed to extend below elevation 160 in order to meet the minimum 40 foot to daylight setback requirements from base of caisson to daylight lines on existing slopes.
5. During the grading process removal and recompaction of native soils at the driveway entrance may be required. During this process all loose native soils shall be removed down to firm native bedrock.
6. Removed soils shall be moisture conditioned to near optimum moisture content replaced in loose lifts of approximately 6 inches, thoroughly mixed, moistened or dried to near optimum moisture content and compacted to minimum of 95% relative compaction.
7. Compaction standard shall be ASTM D-1557 Method of Compaction, most current edition.
8. Fill material behind all retaining walls shall be replaced to a minimum of 90% relative compaction.
9. Existing onsite soils if free of cobbles and rocks greater than 3 inches in the smallest diameter are suitable for backfilling beneath all hardscape and behind all retaining walls.
10. The subdrain trench shall be backfilled with a ¾ inch gravel mixture, conforming to Pervious Backfill of the Standard Specifications for the Public Works Construction (Green Book). The gravel blanket shall be wrapped by a non-woven geotextile filter fabric. Within the gravel blanket, a 4 inch perforated drainpipe will be placed at the bottom of the trench and properly sloped to discharge at the bottom of the slope.

11. Retaining walls forming living portions of the structure shall be protected against moisture penetration with the use of moisture barrier, such as Miradrain by Miralfi. All moisture barriers shall be applied in strict conformance with the manufacturer's recommendations. All moisture collected by the moisture barrier shall be transported away from foundation systems and all slopes, and into a properly designed storm drain system.
12. Backfill material shall extend as a compacted wedge starting from back of walls up at an angle of 1.5^H to 1^V to within 1 foot of slope surface.
13. Surcharge loads, which will affect the loading on the wall, should be considered to be within a projected $1^H:1^V$ line extending upward from the inside base of the wall.
14. The soil bearing values may be increase by $1/3$ when considering short-term wind or seismic movement.
15. Using these criteria, settlement under static loading conditions should not exceed 1 inch total and $3/4$ inch differential within thirty feet.
16. Due to the concern by local governing agencies, grading within the drip line of oak trees and other designated species is prohibited, therefore grading in this area shall be taken to 2 feet outside the drip line as for overexcavation. Should the building footprint extend beyond, the use of deepened footings or caissons as directed in the foundation portion of this report will be utilized.
17. During the grading process should roots from protected tree species greater than $1/8''$ in diameter be encountered the owner or design architect shall be notified. The exposed roots can then be reviewed by a certified arborist who will then provide recommendations for repairing or protecting the root structure.
18. Surface drainage shall direct water away from all man-made slopes and the foundation system of the proposed structure. Further, the residence shall utilize rain gutters and down spouts about the structure and yard drains in the landscaped portions of the property.
19. Current building code standards require all soft scaping shall slope away from the structure at 5% for a minimum of 10 feet.

SHALLOW FOUNDATIONS

1. Slab on grade foundation pad shall be prepared by a cutting operation. The finished pad shall be reviewed by this firm prior to steel placement.

2. All footings for support of interior levels shall extend into the firm weathered bedrock a minimum of 12 inches.
3. All footings shall be reinforced to uniformly distribute the imposed building loads, with a minimum of four #5 rebar placed two in the base and two in the stem of the footing
4. Concrete slab on grade shall be a minimum of 4 inches in thickness. Reinforcing for slab on grade shall consist of #3 rebar spaced at 24 inch on center each way. Reinforcing steel shall be doveled into all exterior footings with a minimum of one #3 rebar spaced at 24 inches on center.
5. Prior to submittal for building permit, this firm shall be requested to review the foundation and grading plans for the project. Comments and revisions if necessary will be provided at that time.
6. A representative of this firm shall be requested to inspect all excavations prior to backfilling, steel reinforcement and concrete or soil placement.
7. Based upon compliance with the above recommendations a maximum safe soil bearing value of 3000 psf may be assumed.
8. The maximum safe soil bearing value may be increased by 1/3 when considering short-term wind or seismic movement.
9. Using these criteria, settlement under static loading conditions should not exceed 1 inch total and 3/4-inch differential within thirty feet.

SITE RETAINING WALLS

Design values presented in this section are based on the assumption proper drainage will be provided. The recommended lateral pressures assume a static drained condition. This is achieved by insuring surface water is directed away from the wall while subsurface moisture is collected by a properly installed subdrain system. Saturation of backfill soils, which creates an undrained condition, can increase lateral earth pressures above 65 pcf.

Unrestrained

For cantilever retaining walls, which do not form part of the structure and are not rigidly attached to sidewalks or other permanent structures the following recommendations are given:

1. Unrestrained cantilever retaining walls shall be designed assuming an active soil pressure equivalent to a fluid whose weight is 30 pounds per cubic foot. This value shall be increased for surcharge backfill by 1 pound per cubic foot for each degree of slope angle over 12°. To resist this lateral pressure a passive soil pressure equivalent to a fluid whose weight is 350 pounds per cubic foot and a coefficient of friction against sliding of 0.35 may be assumed. When combining passive pressure and coefficient of friction to resist lateral movement the passive value shall be reduced by 1/3.

2. Unrestrained site retaining walls not supporting the residence may utilize a standard foundation system.
3. All footings shall extend a minimum depth to provide the 10 horizontal feet between bottom of footing to daylight line on the slope.
4. Surcharge loads, which will affect the loading on the wall, should be considered to be within a projected $1^H:1^V$ line extending upward from the inside base of the wall.
5. Lateral analysis due to seismic loading shall assume a seismic earth pressure of $10H^2$ in pounds per cubic foot equivalent fluid weight in a inverted triangular wedge. The resultant point force due to the seismic loading shall be assumed to act at $.6H$ above the base of the retaining wall. The minimum Factor of Safety for both sliding and overturning as a result of seismic loading shall be 1.2 or per local building code standards.
6. Where slopes occur behind retaining walls the seismic pressure shall be increased by $\frac{1}{2}$ pound per cubic foot for each degree of slope angle over 12 degrees. The combined shall then be determined for the seismic loading.
7. The retaining wall shall be serviced by a subdrain system. The subdrain shall be backfilled with a $\frac{3}{4}$ inch gravel mixture, Pervious Backfill of the Standard Specifications for the Public Works Construction (Green Book). The gravel blanket shall be wrapped by a non-woven geotextile filter fabric. Within the gravel blanket, a 4 inch perforated drainpipe will be placed at the bottom of the trench and properly sloped to discharge at the bottom of the slope.
8. All retaining walls shall be serviced by appropriately placed weep holes or a subdrain system.
9. If retaining walls are to support surface features such as detached sidewalks or patio areas backfill material shall be properly compacted to a minimum of 95% relative compaction. This backfill material shall be non-expansive sands or silty sands. Import material shall be inspected by a representative of this firm before delivery to the site.

It should be noted that cantilever retaining walls are designed assuming an active soil condition. This condition is obtained by anticipated slight rotation, with time, in a downhill direction. In addition, surface features, which obtain their support from compacted retaining wall backfill materials, are anticipated to undergo distress due to this differential movement. Further, additional differential movement may occur due to the retaining wall structure resting upon undisturbed original ground and the surface features behind the retaining wall resting upon compacted fill blanket, with settlement characteristics different from those of the undisturbed original ground.

GENERAL NOTES

Underground Facilities Construction

All contractors shall be familiar with the State of California Construction Safety Orders for "Excavations, Trenches, Earthwork". Trenches or excavations greater than 4 feet in depth should be shored or sloped back in accordance with OSHA Regulations prior to entry.

Sand bedding should be used below and above all utility pipes. Bedding is designed as material placed in the trench both above and below the designated utility pipe while backfill is all material placed in the trench above the bedding. Bedding material should be free draining sand and should be compacted by mechanical means to achieve at least 90% relative compaction based on ASTM Test D-1557-91, most current edition.

Proper compaction of all trenches is necessary under and adjacent to structural fill, building foundations, concrete slabs and vehicle pavement areas.

Temporary Shoring

1. The contractor shall be responsible for job site safety and for the design of temporary slopes and shoring. Based on soil conditions encountered in our boring we are recommending a temporary shoring system be designed for a sandy soil condition using uniform soil pressure distribution.
2. Soil pressure acting on braced or shored excavations in pounds per square foot can be estimated as $22H + 75$ psf, where H is the depth of the excavation and 75 psf is the surcharge load for the excavation equipment as given in the OSHA guidelines.

Excavating material where possible shall be stockpiled away from the excavation or transported off-site so as not to provide additional surcharge from the stockpiled material.

Trenches & Trench Backfill

1. Import shall be non-expansive sands or silty sands with an expansion index less than 20 and less than 10% passing the #200 sieve.
2. Trenching for all below grade utilities including water lines, sewer lines, electric, irrigation shall be properly bedded to prevent damage to the pipes from rocks and other protuberances.
3. Multiple pipes in a common trench shall be properly spaced to prevent bridging of backfill. Piping shall be spaced a minimum of 1 inch apart based on utility requirements.
4. Backfill beneath, around and above the pipes within the pipe zone shall be clean coarse sand complying with Greenbook specifications for clean sand backfill.

5. No jetting of trenching is allowed.
6. Minimum compaction standards shall be 90% within the pipe zone and 95% above the pipe zone. The pipe zone shall be a minimum of 12 inches above the highest conduit. Native soils may be used above this pipe zone. All fill of native soils shall be placed in loose lifts of approximately 6 inches moistened or dried to near optimum moisture content, mixed as necessary in order to obtain a homogenous uniform soil mixture and compacted to a minimum of 95% relative compaction.

Surface and Subsurface Drainage

1. Concentrated surface water runoff within or immediately adjacent to the project should be conveyed in pipes or in lined channels to discharge areas that are relatively level or into an approved storm drain system.
2. Water from downspouts should be conveyed in pipes that discharge in areas away from structures. Surface drainage gradients should be planned to prevent ponding and promote drainage of surface water away from building foundations, edges of pavements and sidewalks. In general it is recommended a minimum of 5% slope be maintained for the first 10 feet adjacent to these structures.
3. Drainage should be established at the time of fine grading and once all landscaping has been installed. This drainage shall be maintained throughout the life of the structure and only altered to increase the effectiveness of the drainage. Property owners should be aware that altering drainage patterns, landscaping, the addition of patios, planters, and other improvements may affect not only the performance of the existing drainage but the structural performance of all permanent structures.
4. Routine maintenance of the drainage system including roof gutters, downspouts and discharge pipes should be implemented at least twice a year for clogging, debris and proper slope. Any debris shall be removed and properly disposed of.
5. Sprinkler systems should be routinely checked and visible signs of leakage shall be immediately repaired. Watering schedules should be varied and adjusted according to the season and types of landscaping.
6. Site maintenance for residences, which have both or either cut and fill slopes it, is crucial to prevent concentrated erosion and potential for slope slippage. Water shall not be allowed to pond or overflow these slopes at any point along their way.
7. All slopes shall be planted with deep-rooted drought resistant vegetation. Ideas for these types of plants can be obtained from your local nursery. Control of burrowing animals is important to prevent water from being collected in these underground holes and possibly being discharged onto slopes. Control of burrowing animals should be conducted in a safe manner in accordance with animal control organizations.

Limitations

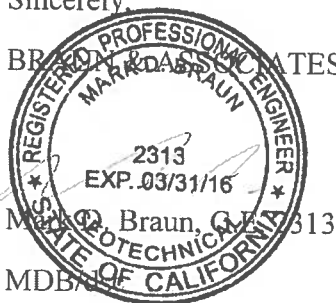
The recommendations provided in this report are based upon this firm's understanding of the described project information and our interpretations of data collected during the subsurface exploration. Conclusions and professional opinions presented here were developed by Braun & Associates, Inc., in accordance with generally accepted geotechnical engineering principles and practices for this area. No other warranty is either expressed or implied.

This report has been prepared for use only by Mr. Mark Travers and their appointed representatives. This report may not contain sufficient information for use on other projects. If any changes are made to the project as outlined in this report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions and recommendations of the report are modified and approved in writing by Braun & Associates, Inc.

This report is based on the assumption that the necessary reviews technical observation and testing, during construction, will be provided by a representative of this firm. Field observation service is a continuation of the geotechnical investigation and intended to verify that the actual conditions are as anticipated. This also provides the client the means of dealing with unanticipated changes to existing conditions, which may require modification of the original recommendations. If another firm is obtained for the geotechnical observation of this project, the responsibility and liability of Braun & Associates, Inc., will be limited to the analytic results obtained during laboratory testing.

Sincerely,

BRUN & ASSOCIATES, INC.



APPENDIX

EXPLORATIONS

Exploratory borings were conducted for the purpose of logging the subsurface profile and obtaining relatively undisturbed samples of the underlying soils. Drilling was conducted using a gas powered mobile drill and a hand auger.

Soils encountered were logged by our field technician and relatively undisturbed samples were collected for laboratory inspection and testing. The samples were obtained using a modified California split spoon sampler. The modified California sampler is a three-inch outside diameter by 2.4 inch inside diameter tube, which is split longitudinally. This allows the insertion and removal of inch long brass rings and six-inch long brass tubes with minimal disturbance to the sample. The sampler is generally driven 12 to 18 inches into the materials at the bottom of the drill stems using a 140-pound trip hammer with a 30-inch drop. The number of blows needed to drive the sampler the last 12 inches into the soils are recorded and shown on the left of the boring log.

Soils encountered were logged by our field technician and relatively undisturbed samples were collected for laboratory inspection and testing. The samples were obtained using a Shelby tube sampler. The sampler is a solid tube with the same inside and outside dimensions as the California split tube sampler. Relatively undisturbed samples are obtained by driving the sampler four to six inches into the bottom of the excavation using a 30-lb. slide hammer.

Recovered samples are identified, tagged and sealed into plastic tubes. All samples were placed in transport containers and returned to our laboratory for testing.

The logs of borings are presented on Plates A-2.1 and A-2.3. The depth and description of soils encountered are indicated on the right of the boring log. Stratification lines on the logs represent the approximate boundary between predominant soil types. Minor layers of differing material types may be contained within the strata and a gradual transition should be expected between strata. Engineering description and material classification used on the boring logs are in accordance with the Unified Soil Classification System.

LABORATORY

The results of laboratory testing are presented on the enclosed plates. The following laboratory tests were conducted on representative samples in accordance with the latest applicable ASTM standards.

The field moisture content and dry density of the soils encountered were determined by performing tests on the undisturbed samples. The results of the tests are shown to the left of the boring logs.

In place relative density of the native soils was determined at the main residence. Testing was performed by ASTM D-1556 the Sand Cone Method. Results are shown on Plate A- 3.1,
SUMMARY OF COMPACTION TEST RESULTS.

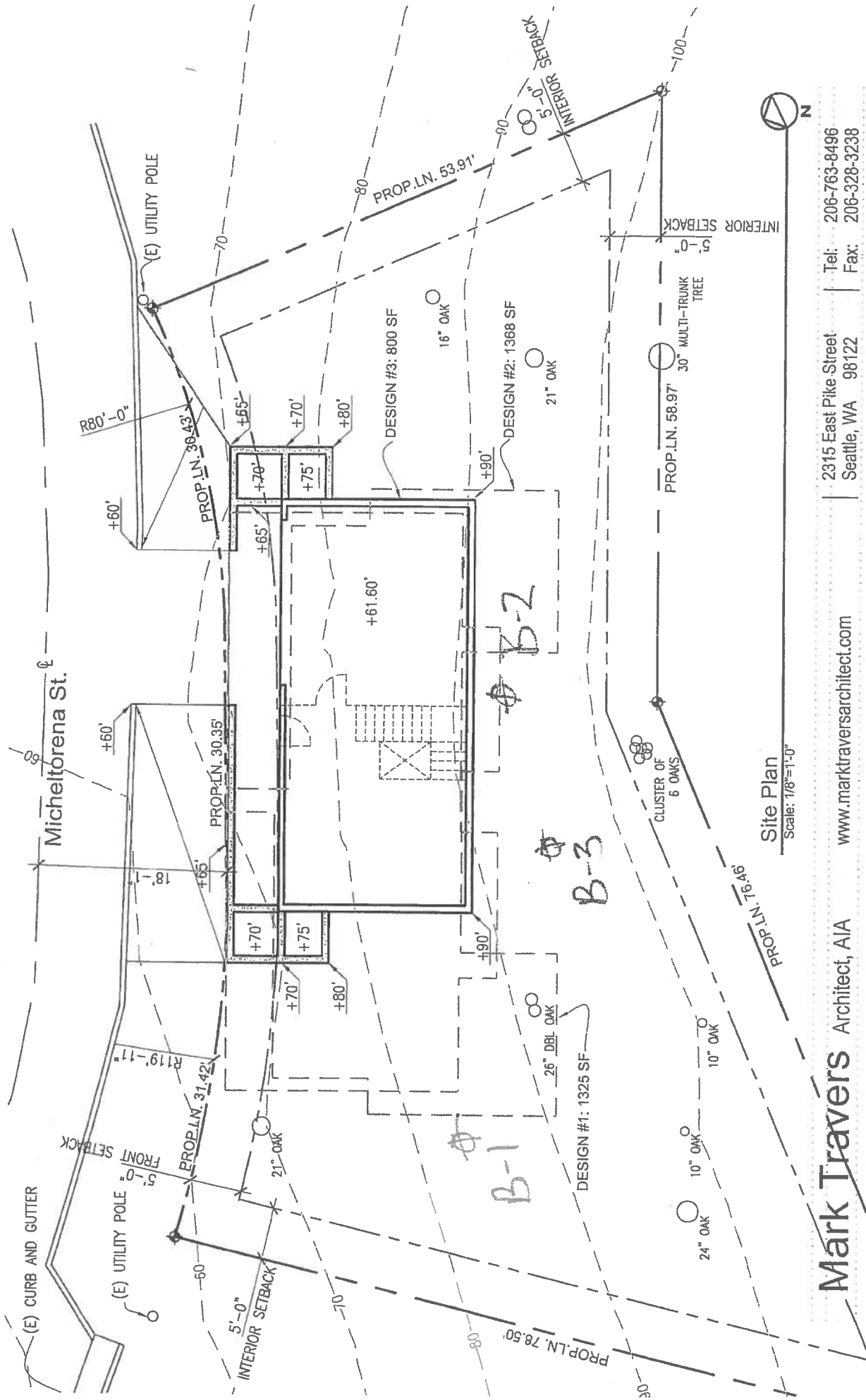
The optimum moisture content and maximum dry density of the upper soils were determined by performing a maximum density test on the sample obtained from the field density test. The testing was performed in accordance with the ASTM Designation D-1557 Method of Compaction. The results of the test are presented on Plate A- 3.1, SUMMARY OF COMPACTION TEST RESULTS.

Mechanical and Hydrometer analyses were performed on various samples to determine the particle size distribution of the soils. Testing was performed in accordance with ASTM D422. The results are presented on Plates A- 4.1 thru A- 4.2, GRAIN SIZE DISTRIBUTION.

Soil expansion characteristics of the existing surface soils were determined by Uniform Building Code Standard No. 29-2. Results are shown on Plate A- 5.1, EXPANSION INDEX DETERMINATION.

Confined consolidation tests were performed on three (3) relatively undisturbed samples to determine the compressibility of the soils. Water was added to the samples during the tests to illustrate the effect of moisture on the compressibility. The results of the tests are presented on Plate A- 6.1, CONSOLIDATION TEST DATA.

A direct shear test was performed on a selected undisturbed sample to determine the strength of the supporting soils. The test was performed at field moisture content and at various surcharge pressures. The yield point values determined from the direct shear tests are presented on Plate A- 7.1, DIRECT SHEAR TEST DATA.



Mark Travers Architect, AIA www.marktraversarchitect.com 2315 East Pike Street Tel: 206-763-8496
Seattle, WA 98122 Fax: 206-328-3238

PLATE A-1.1

UNIFIED SOIL CLASSIFICATION SYSTEM



Major Divisions			Graphic Symbols	Letter Symbols	Typical Descriptions
Coarse Grained Soils	Gravel & Gravelly Soils	Clean Gravels (Little or no fines)		GW	Well graded gravels, gravel-sand mixtures, little or no fines
		Gravels with Fines (Appreciable amount of fines)		GP	Poorly graded gravels, gravel-sand mixtures, little or no fines
	Sand & Sandy Soils	Clean Sands (Little or no fines)		GM	Silty gravels, gravel-sand-silt mixtures
		Sands with Fines (Appreciable amount of fines)		GC	Clayey gravels, gravel-sand-clay mixtures
Fine Grained Soils	Silt & Silty Soils	Silt & Silty Soils (Little or no fines)		SW	Well graded sands, gravelly sands, little or no fines
		Silt & Silty Soils (Appreciable amount of fines)		SP	Poorly graded sands, gravelly sands, little or no fines
	Clay & Clayey Soils	Clay & Clayey Soils (Little or no fines)		SM	Silty sands, sand-silt mixtures
		Clay & Clayey Soils (Appreciable amount of fines)		SC	Clayey sands, sand-clay mixtures
Highly Organic Soils	Silt & Silty Soils	Liquid limit less than 50		ML	Inorganic silts, rock flour or clayey silt with low plasticity
		Liquid limit less than 50		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	Clay & Clayey Soils	Clay & Clayey Soils (Little or no fines)		OL	Organic silts and clayey silts of low plasticity
		Clay & Clayey Soils (Appreciable amount of fines)		MH	Inorganic plastic silts, micaceous or diatomaceous silts
Highly Organic Soils	Silt & Silty Soils	Liquid limit less than 50		CH	Inorganic clays of high plasticity, fat clays
		Liquid limit less than 50		OH	Organic clays of medium to high plasticity, organic silty clays
	Clay & Clayey Soils	Clay & Clayey Soils (Little or no fines)		PT	Peat, humus, swamp soils with high organic contents, fibrous
		Clay & Clayey Soils (Appreciable amount of fines)			

NOTE: Dual symbols are used to indicate borderline soil classifications.

BORING LOG

BORING NUMBER: 1						
Elevation (ft.)	Std. Pen. Test	Moisture Content	Dry Density	Depth (ft.)	Sample Location	Date Drilled: October 29, 2014 Equipment Used: Mobil Auger Rig Latitude: 34.41335 Longitude: -119.72105
Note: The log of subsurface conditions shown hereon applies only at specific boring location and at date indicated.		1	8.8	1	GM	Dark brown SILTY SAND some GRAVELS,, moist, moderately firm, well graded
				2	R	
				3	SM/ Bedrock	Orangish-brown SAND slight SILT & COBBLES moist, moderately firm, poorly graded
				4		
				5	R	Dark orangish-brown SILTY SAND & COBBLES, moist, firm, poorly graded
				6	SM/ Bedrock	
				7		Rejection at 7 ft

BORING LOG

						BORING NUMBER: 2	
						Date Drilled: October 29, 2014 Equipment Used: Mobil Auger Rig Latitude: 34.41335 Longitude: -119.72105	
Elevation (ft.)	Std. Pen. Test	Moisture Content	Dry Density	Depth (ft.)	Sample Location		
		9.1		1	GM		Dark brown SILTY SAND some GRAVELS,, moist, moderately firm, well graded
				2			
				3	SM/ Bedrock		Orangish-brown SAND slight SILT & COBBLES moist, moderately firm, poorly graded
				4			
				5			
							Rejection at 5 ft

Note: The log of subsurface conditions shown hereon applies only at specific boring location and at date indicated.

BORING LOG

[illegible]

SUMMARY OF COMPACTION TEST RESULTS

PROJECT: 1240 W. Nicheltorena
Travers

Test No	Date	Depth of test from F.G. (ft.)	Soil Type	Moisture Content (%)	Dry Density (pcf)	Max. Dry Density (pcf)	% of Max. Density	Remarks
1	11/17/14	2.0	I	9.1	89.5	99.7	89.7	

MAXIMUM DENSITY - OPTIMUM MOISTURE RESULTS

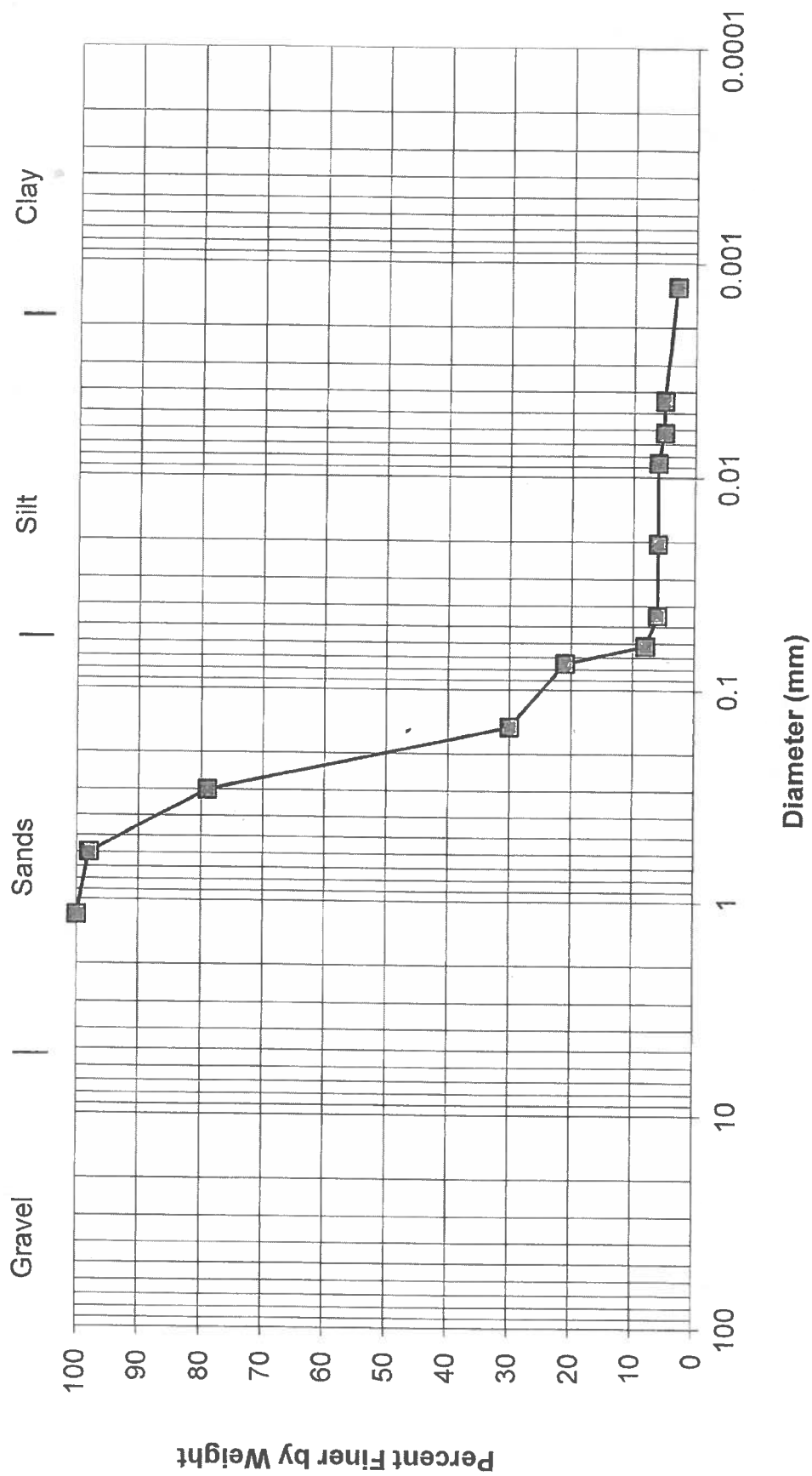
Soil Type	Description	Maximum Density (pcf)	Optimum Moisture (%)
I	Dark/brown SILTY SAND & GRAVEL	99.7	18.6
	Curve Points	(97.0@16.7)	(99.3@19.6)

The graph illustrates the grain size distribution of a soil sample. The y-axis represents the 'Percent Finer by Weight' from 0 to 100. The x-axis represents the 'Diameter (mm)' on a logarithmic scale from 100 to 0.0001. The curve starts at 100% finer for diameters greater than 1 mm and drops to approximately 5% finer at 0.075 mm. The soil is classified as 'Sands' based on the graph's texture labels.

Diameter (mm)	Percent Finer by Weight (%)
100	100
60	100
47.5	100
30	100
25	100
20	100
15	100
12.5	100
10	100
7.5	100
6	100
4.75	100
3.75	100
3	100
2.5	100
2	100
1.5	100
1.18	100
0.85	100
0.75	100
0.6	100
0.425	100
0.3	100
0.25	100
0.2	100
0.15	100
0.125	100
0.106	100
0.085	100
0.075	100
0.06	100
0.05	100
0.0425	100
0.0375	100
0.03	100
0.025	100
0.02	100
0.015	100
0.0125	100
0.0106	100
0.0085	100
0.0075	100
0.006	100
0.00425	100
0.003	100
0.0025	100
0.002	100
0.0015	100
0.00125	100
0.00106	100
0.00085	100
0.00075	100
0.0006	100
0.000425	100
0.0003	100
0.00025	100
0.0002	100
0.00015	100
0.000125	100
0.000106	100
0.000085	100
0.000075	100
0.00006	100
0.0000425	100
0.00003	100
0.000025	100
0.00002	100
0.000015	100
0.0000125	100
0.0000106	100
0.0000085	100
0.0000075	100
0.000006	100
0.00000425	100
0.000003	100
0.0000025	100
0.000002	100
0.0000015	100
0.00000125	100
0.00000106	100
0.00000085	100
0.00000075	100
0.0000006	100
0.000000425	100
0.0000003	100
0.00000025	100
0.0000002	100
0.00000015	100
0.000000125	100
0.000000106	100
0.000000085	100
0.000000075	100
0.00000006	100
0.0000000425	100
0.00000003	100
0.000000025	100
0.00000002	100
0.000000015	100
0.0000000125	100
0.0000000106	100
0.0000000085	100
0.0000000075	100
0.000000006	100
0.00000000425	100
0.000000003	100
0.0000000025	100
0.000000002	100
0.0000000015	100
0.00000000125	100
0.00000000106	100
0.00000000085	100
0.00000000075	100
0.0000000006	100
0.000000000425	100
0.0000000003	100
0.00000000025	100
0.0000000002	100
0.00000000015	100
0.000000000125	100
0.000000000106	100
0.000000000085	100
0.000000000075	100
0.00000000006	100
0.0000000000425	100
0.00000000003	100
0.000000000025	100
0.00000000002	100

Plate A-4.1

Grain Size Distribution



Location B-1
Depth: 5 ft

Plate A-4.2

EXPANSION INDEX DETERMINATION

UBC STANDARD 29-2

Location:

Sample No.	:	1
Boring	:	B-2
Depth, feet	:	2 ft
Soil Description	:	Dark brown SILTY SAND & GRAVELS

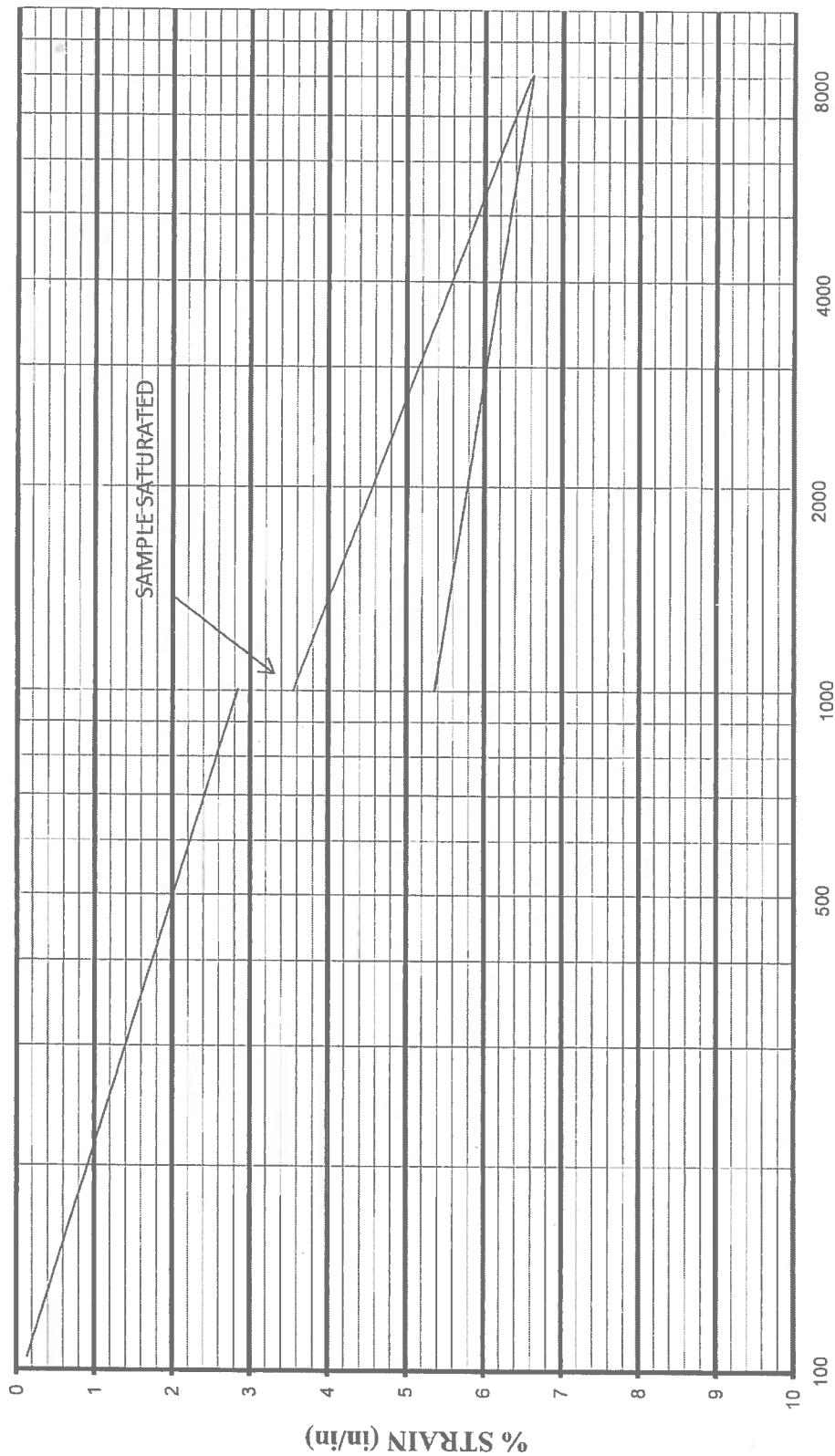
Unit Weight and Moisture:

Dry Density, pcf	:	99.6
Moisture, % at 50% saturation	:	16.1
Moisture, % at 100% saturation	:	31.4

Swell Test Results:

Swell at 144 psf	:	4.2%
Expansion Index	:	42
Expansive Potential	:	Low

CONSOLIDATION TEST DATA

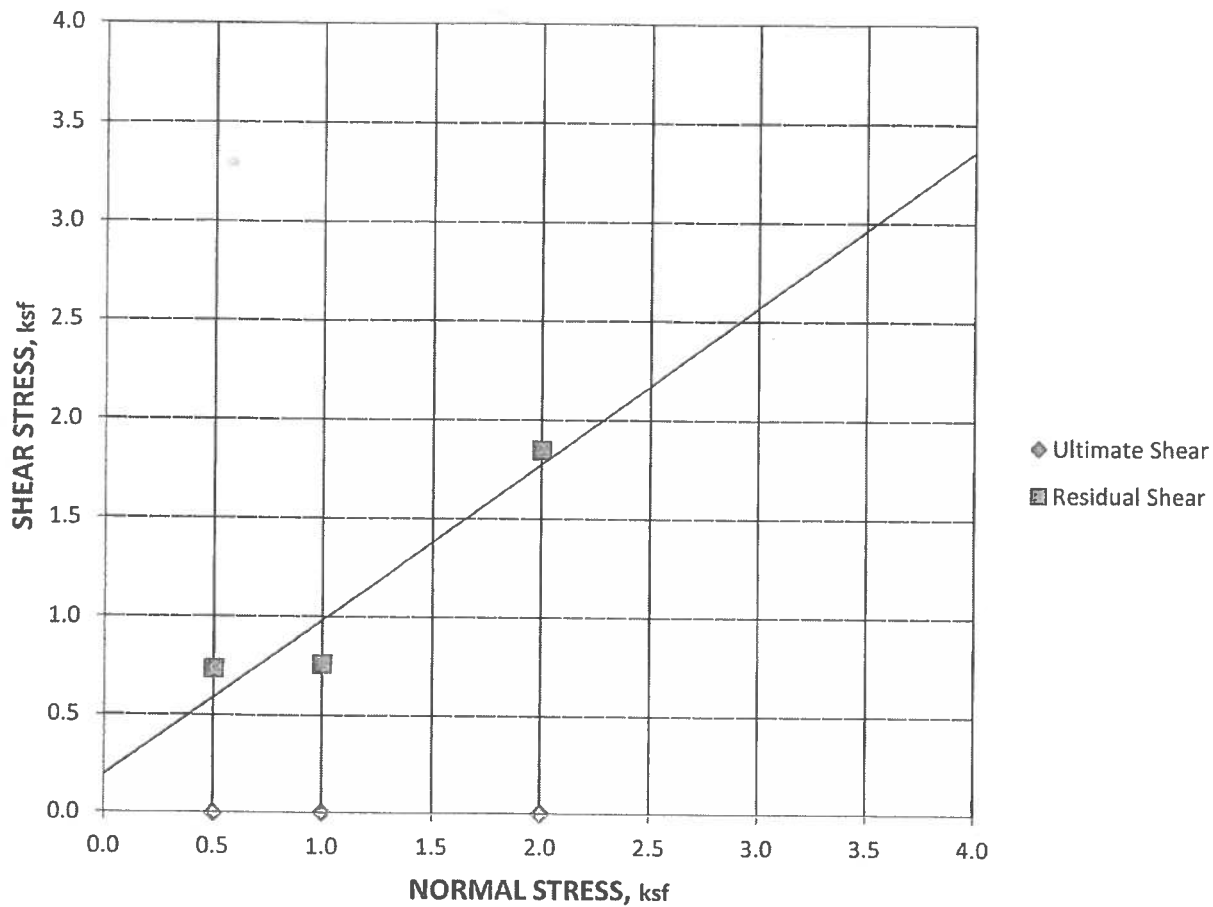


LOAD (psf)

LOCATION B-1
DEPTH: 2

PLATE A-6.1

Direct Shear Test Data



Ultimate Effective Cohesion	0 psf
Residual Effective Cohesion	200 psf
Ultimate Effective Angle of Internal Friction	0 deg
Residual Effective Angle of Internal Friction	36 deg
Location	B-1
Depth	2.5 ft
Moisture Content	5.7 %
Unit Dry Weight	90.2 pcf
Material Description	Dark brown medium coarse SAND
Sample Condition	Fair

Plate A-7.1

Seismic Design Criteria

Design Maps Summary Report

User-Specified Input

Report Title 1240 w micheltorena

Thu November 6, 2014 19:50:07 UTC

Building Code Reference Document ASCE 7-10 Standard

(which utilizes USGS hazard data available in 2008)

Site Coordinates 34.41335°N, 119.72105°W

Site Soil Classification Site Class D - "Stiff Soil"

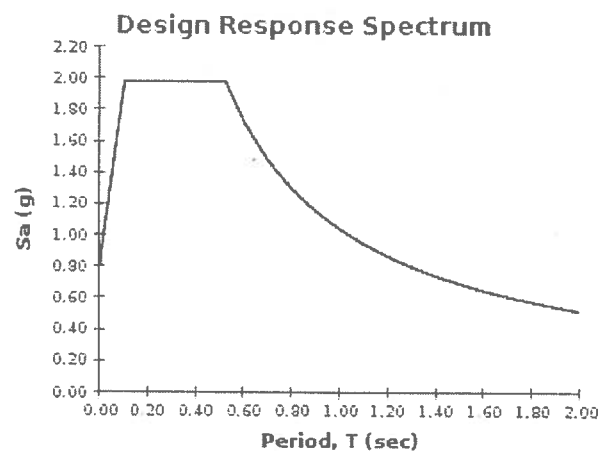
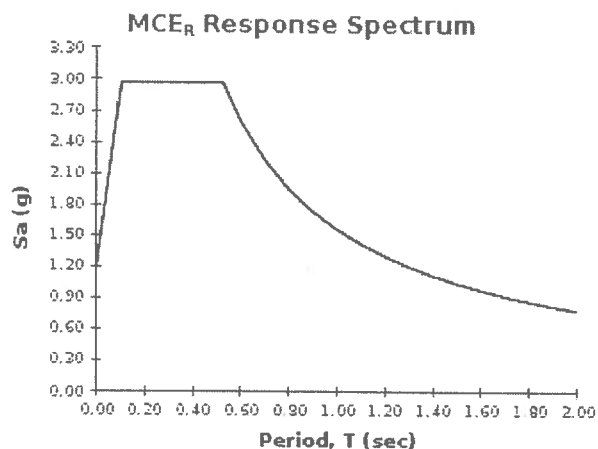
Risk Category I/II/III



USGS-Provided Output

$S_s = 2.967 \text{ g}$	$S_{MS} = 2.967 \text{ g}$	$S_{DS} = 1.978 \text{ g}$
$S_1 = 1.038 \text{ g}$	$S_{M1} = 1.557 \text{ g}$	$S_{D1} = 1.038 \text{ g}$

For information on how the S_s and S_1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.



For PGA_M , T_L , C_{RS} , and C_{R1} values, please [view the detailed report](#).

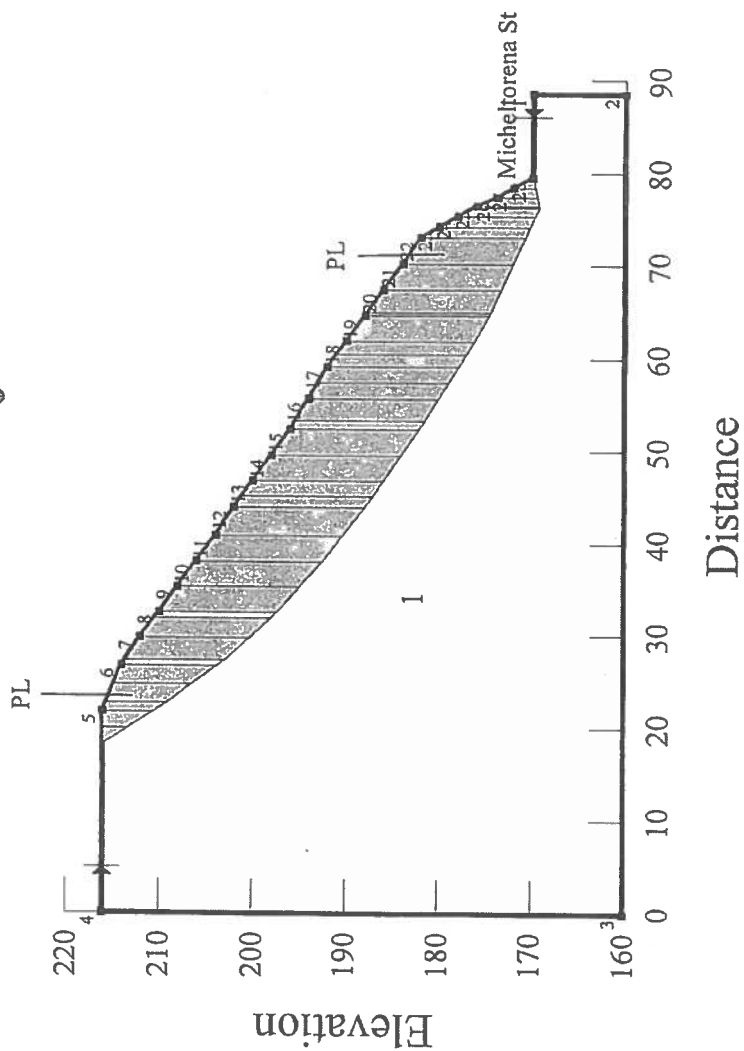
Slope Stability Analysis

Static Analysis

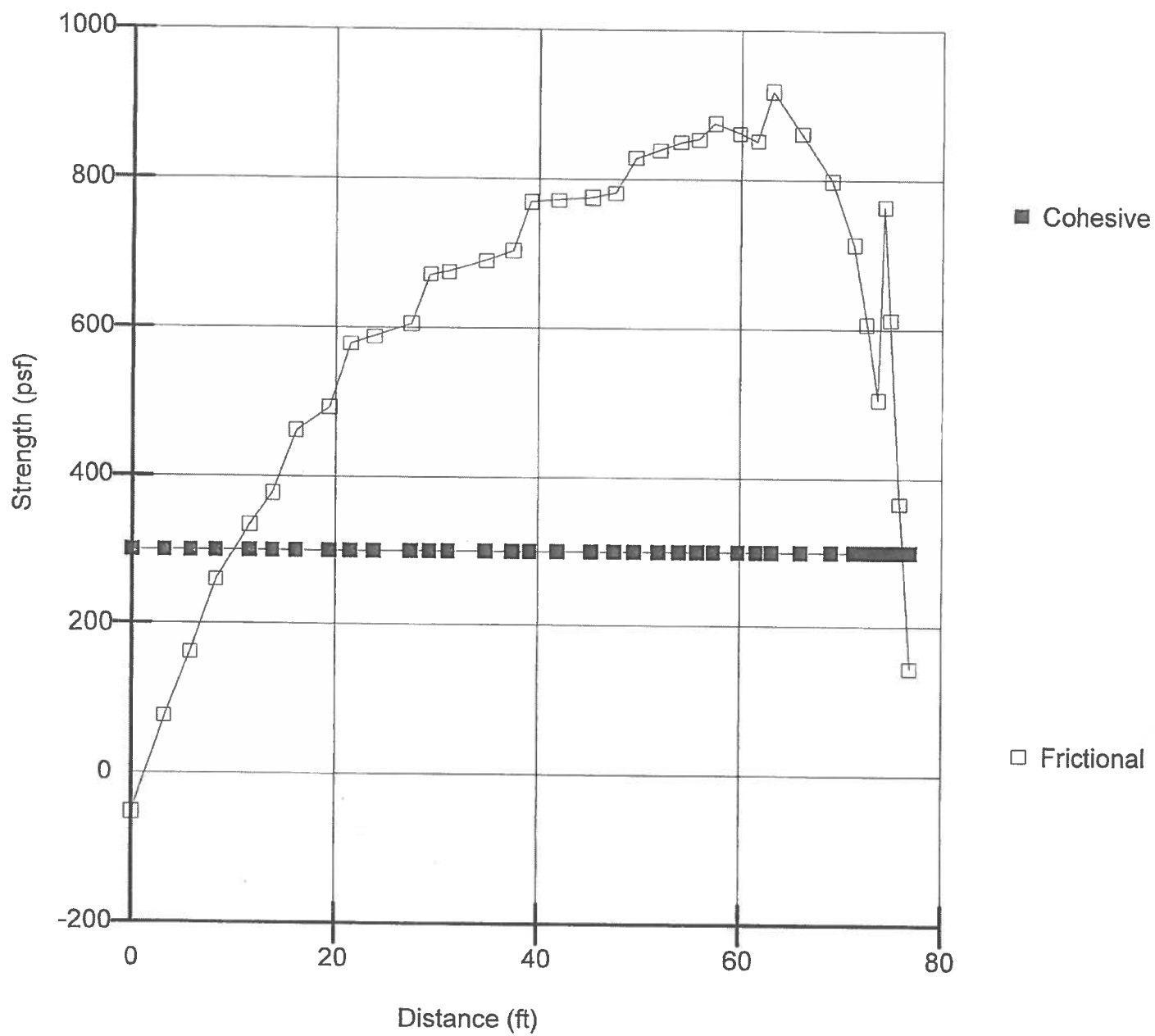
STATIC

FACTOR OF SAFETY

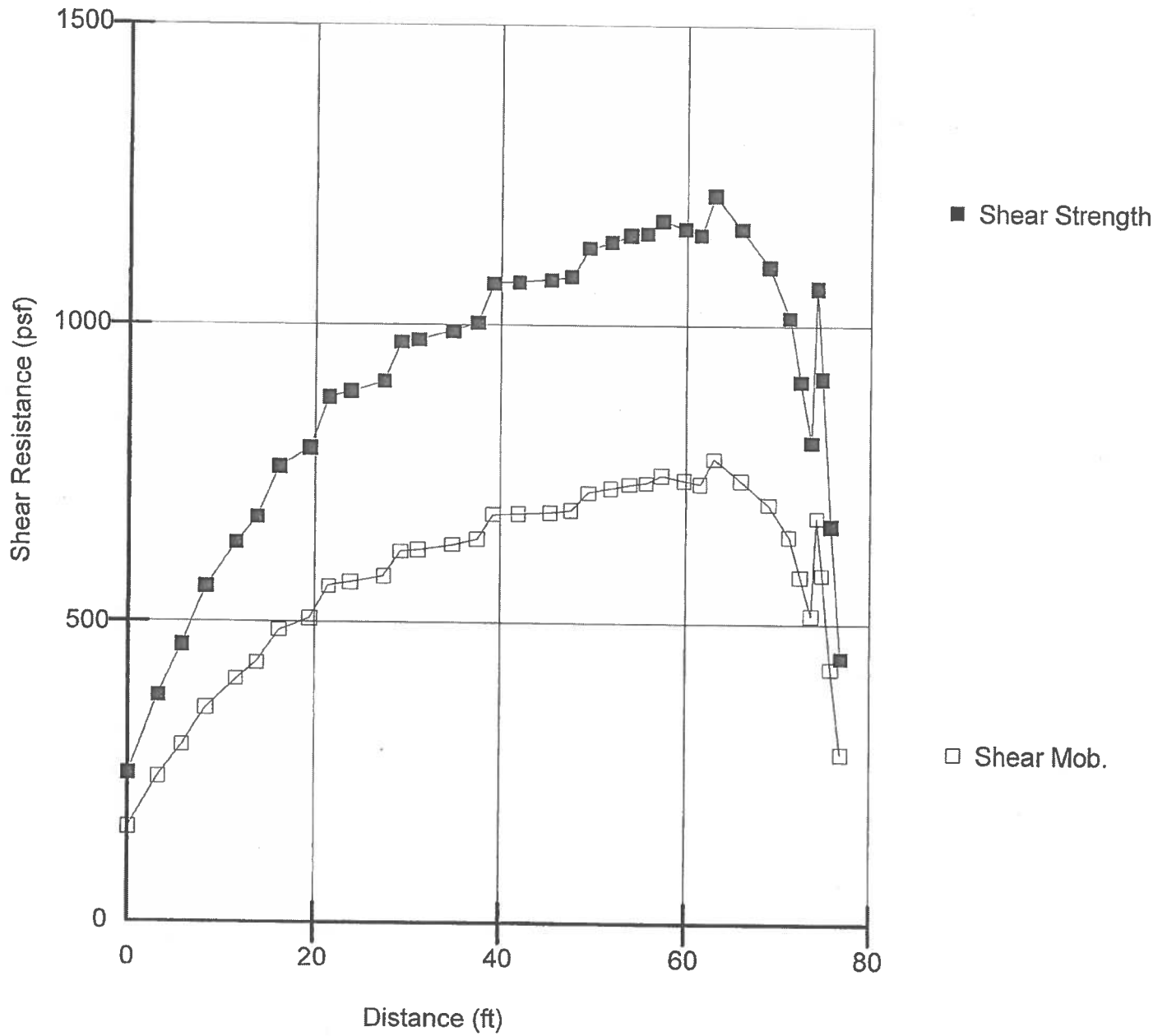
$$\frac{1.6}{\phi}$$



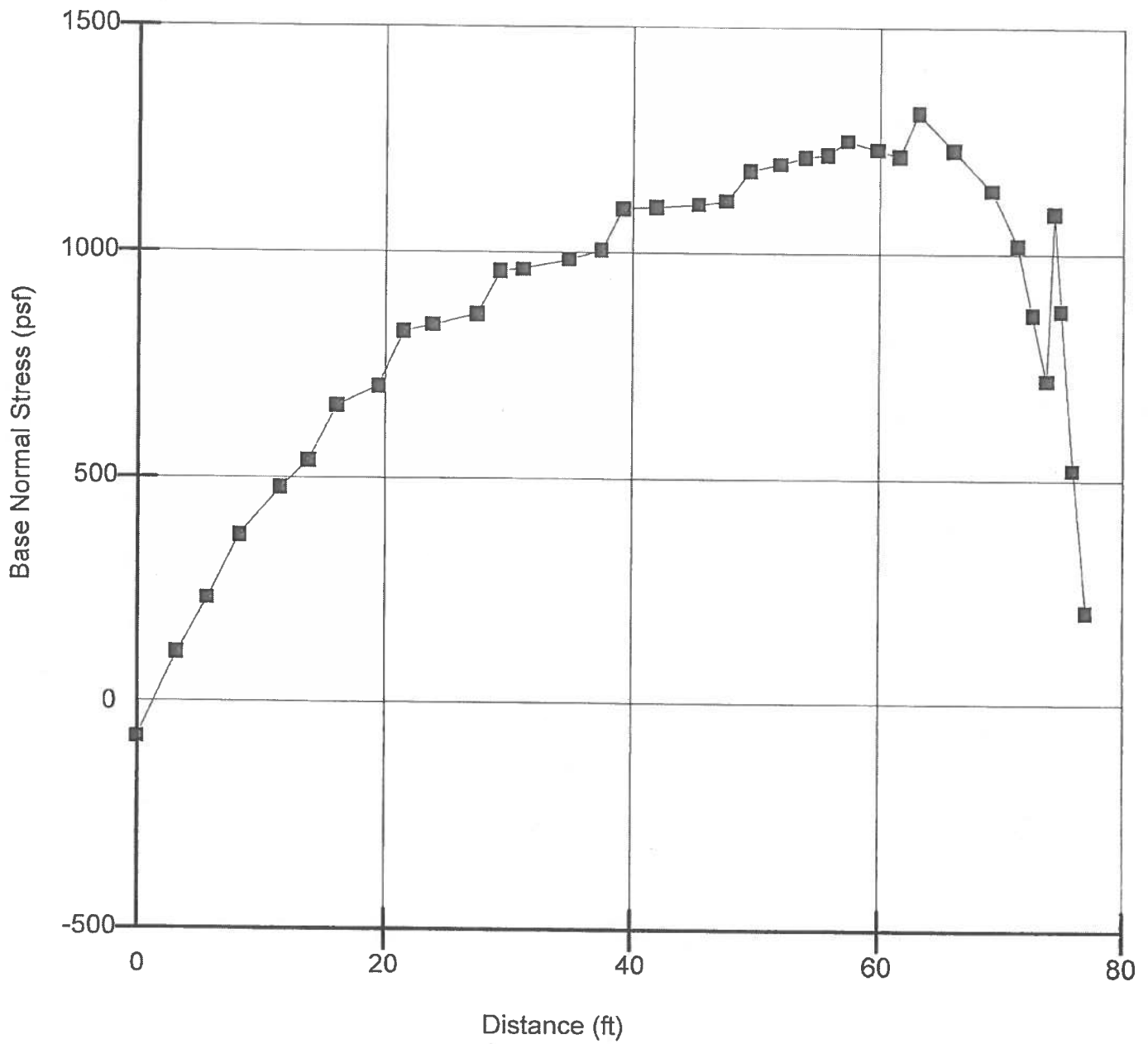
Strength (psf) vs. Distance (ft)



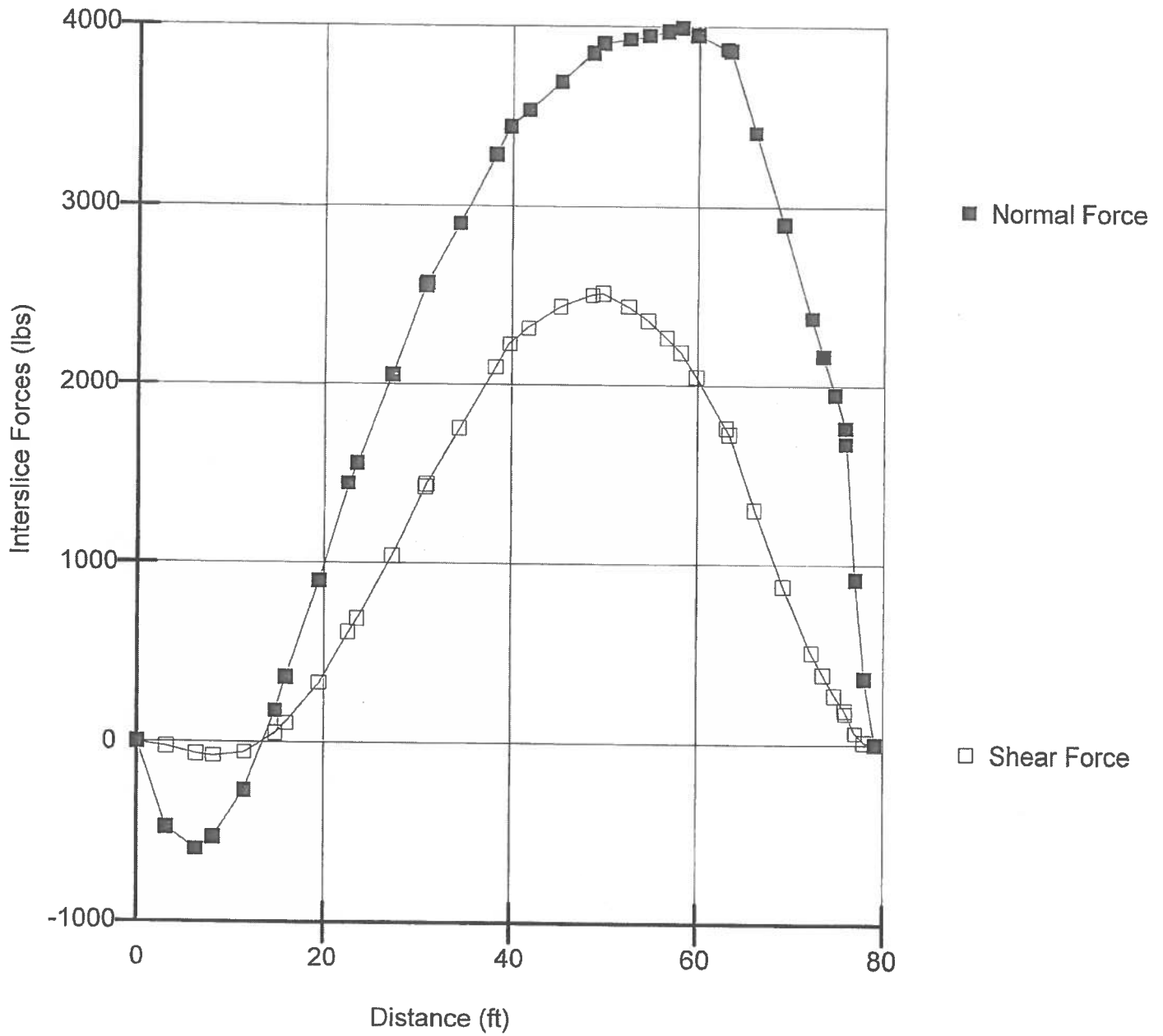
Shear Resistance (psf) vs. Distance (ft)



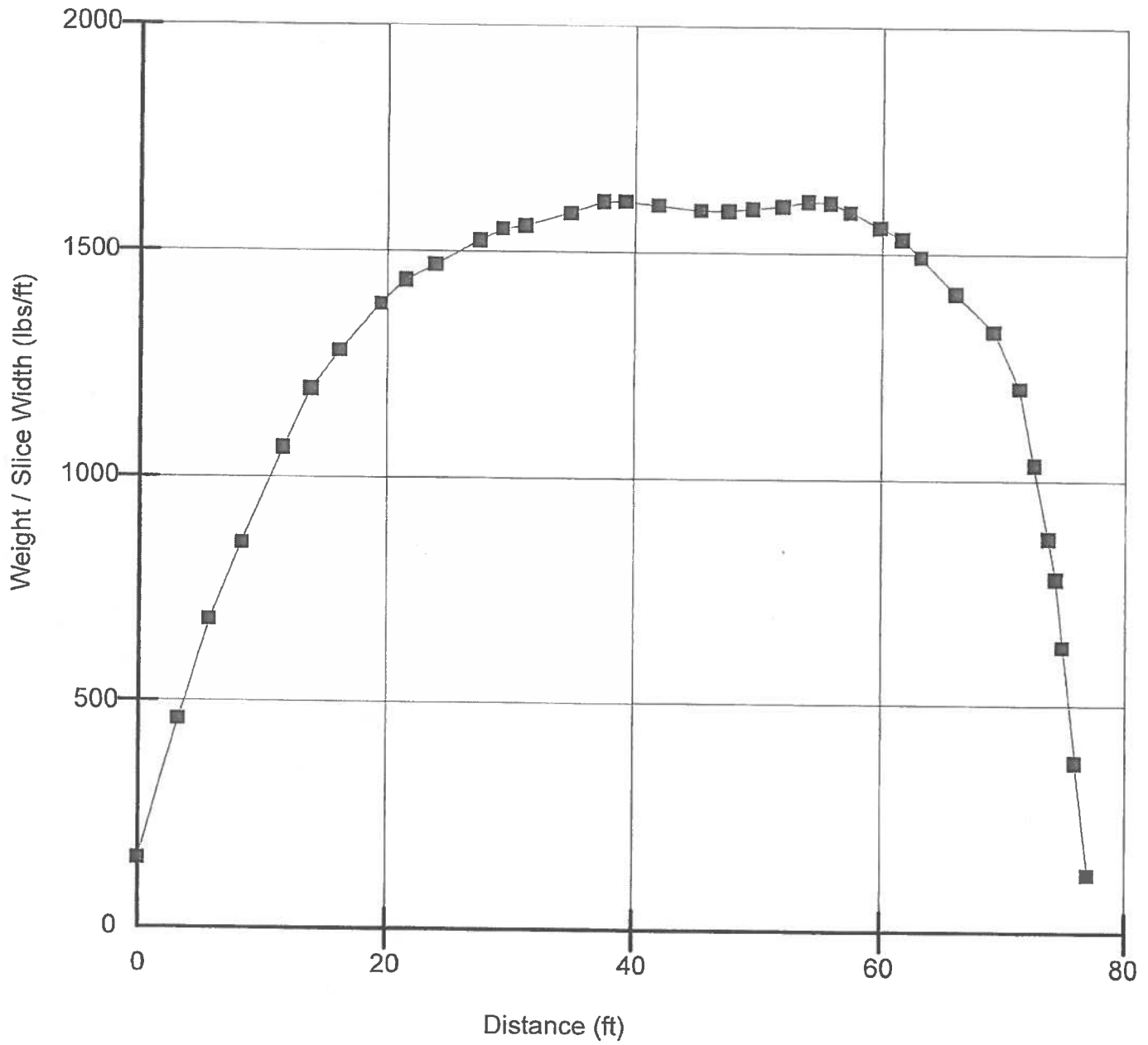
Base Normal Stress (psf) vs. Distance (ft)



Interslice Forces (lbs) vs. Distance (ft)



Weight / Slice Width (lbs/ft) vs. Distance (ft)

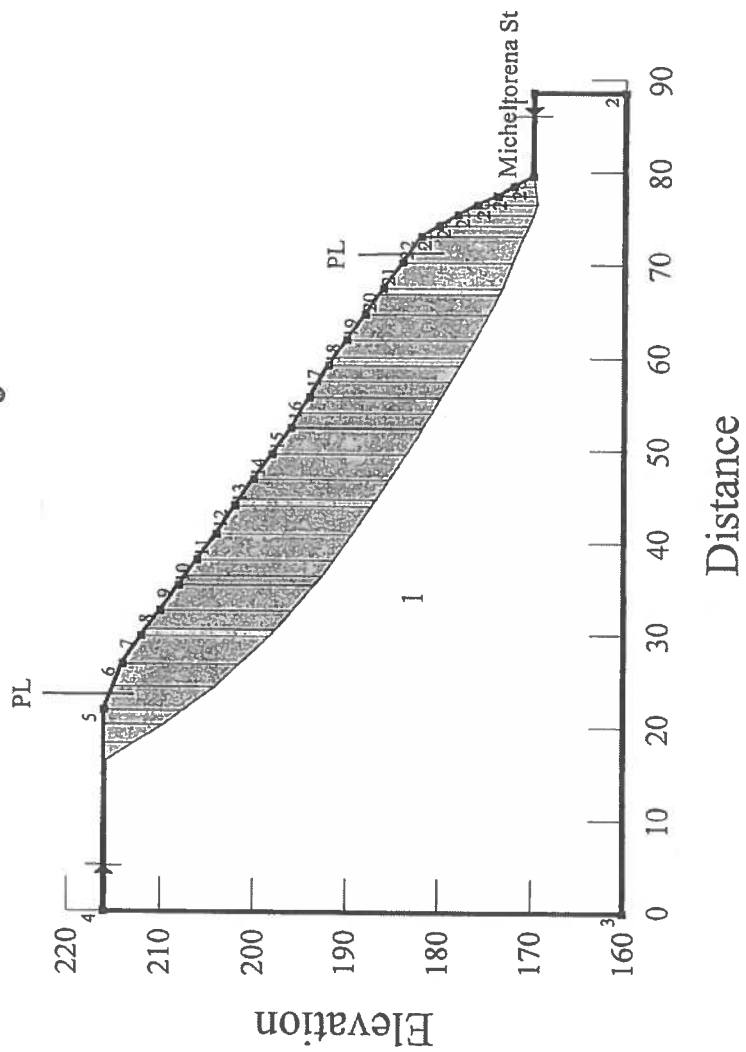


Pseudo-Static Analysis

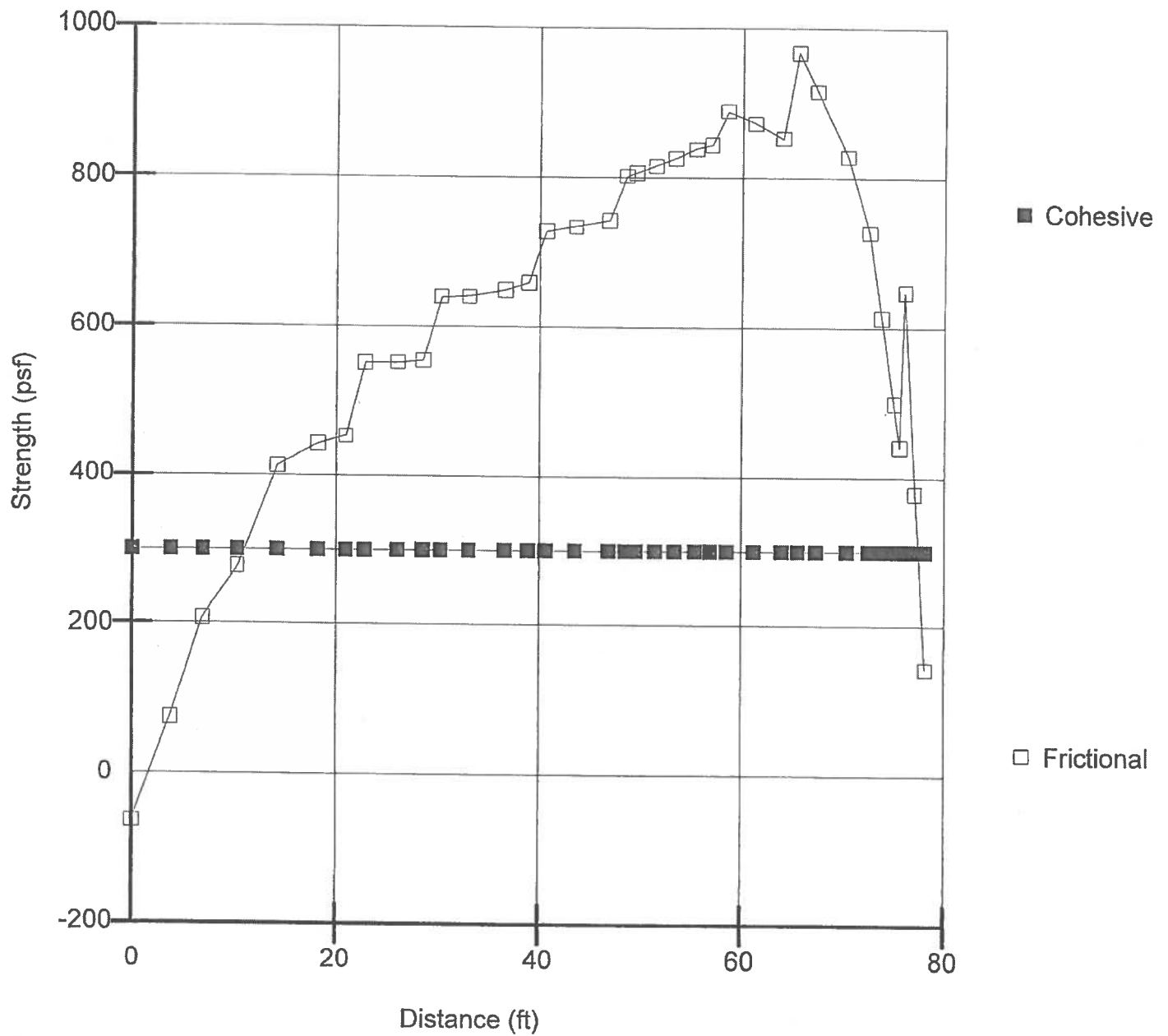
Pseudo Staff

FACTOR OF SAFETY

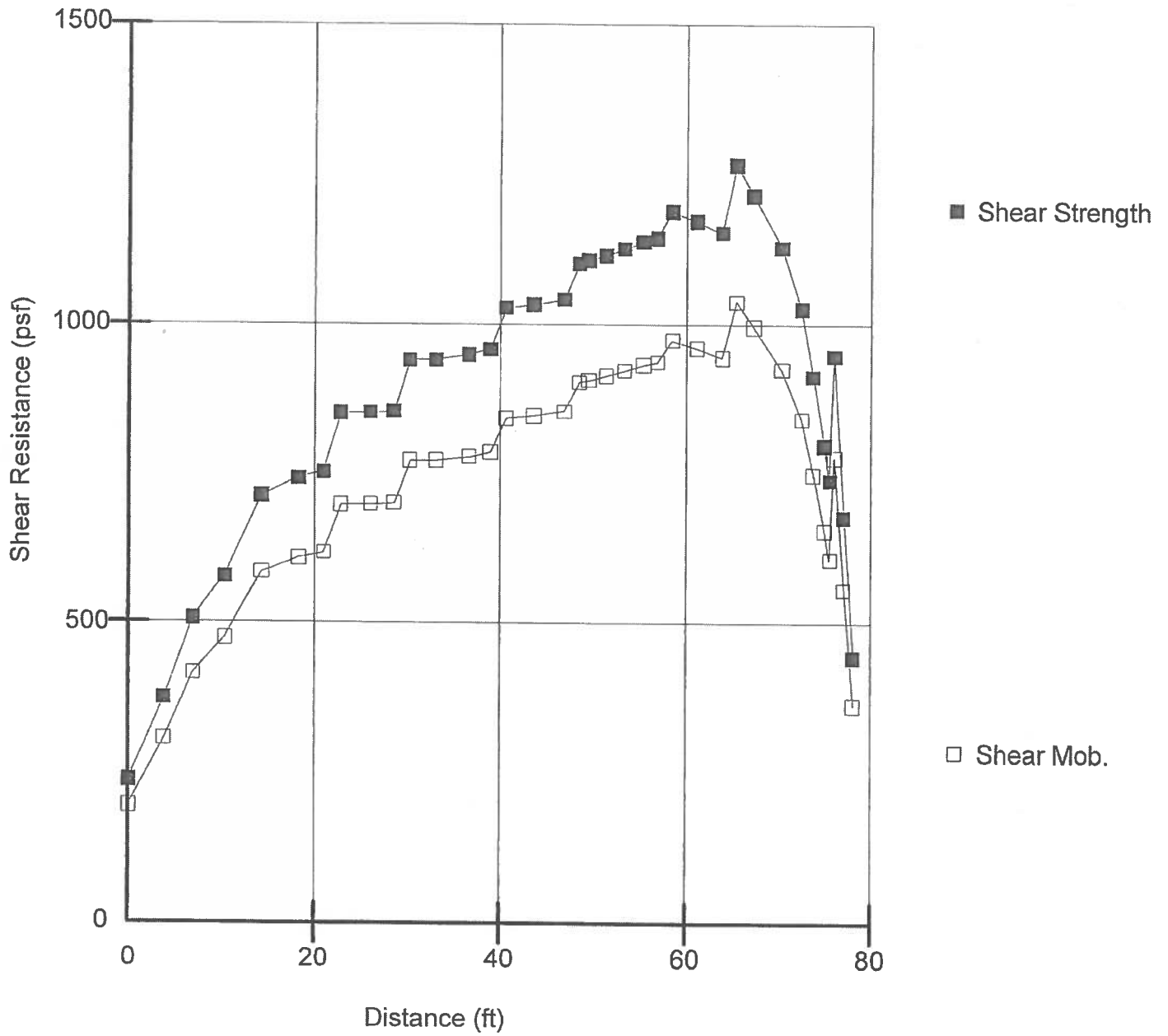
$$\frac{1.2}{\bullet}$$



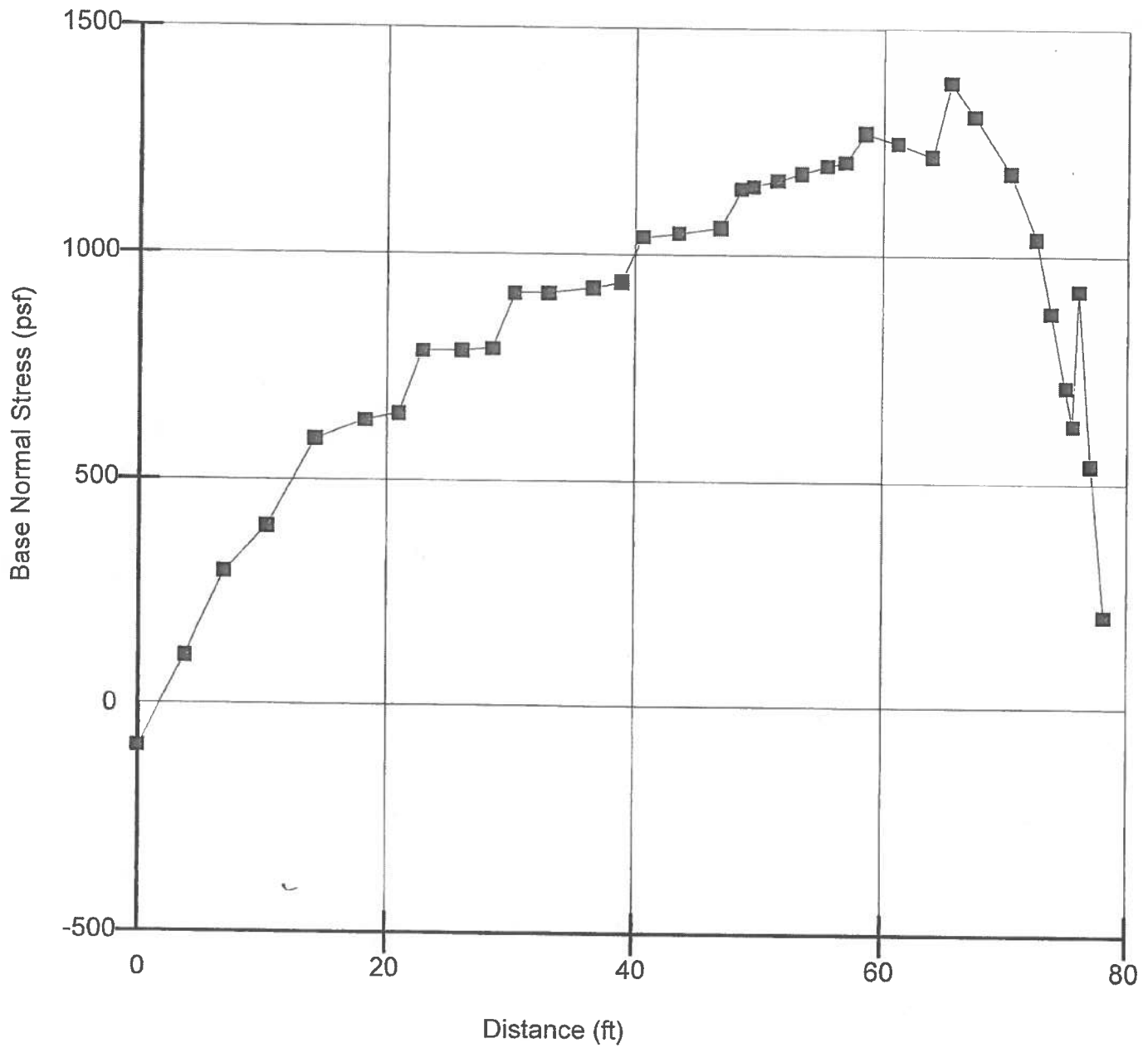
Strength (psf) vs. Distance (ft)



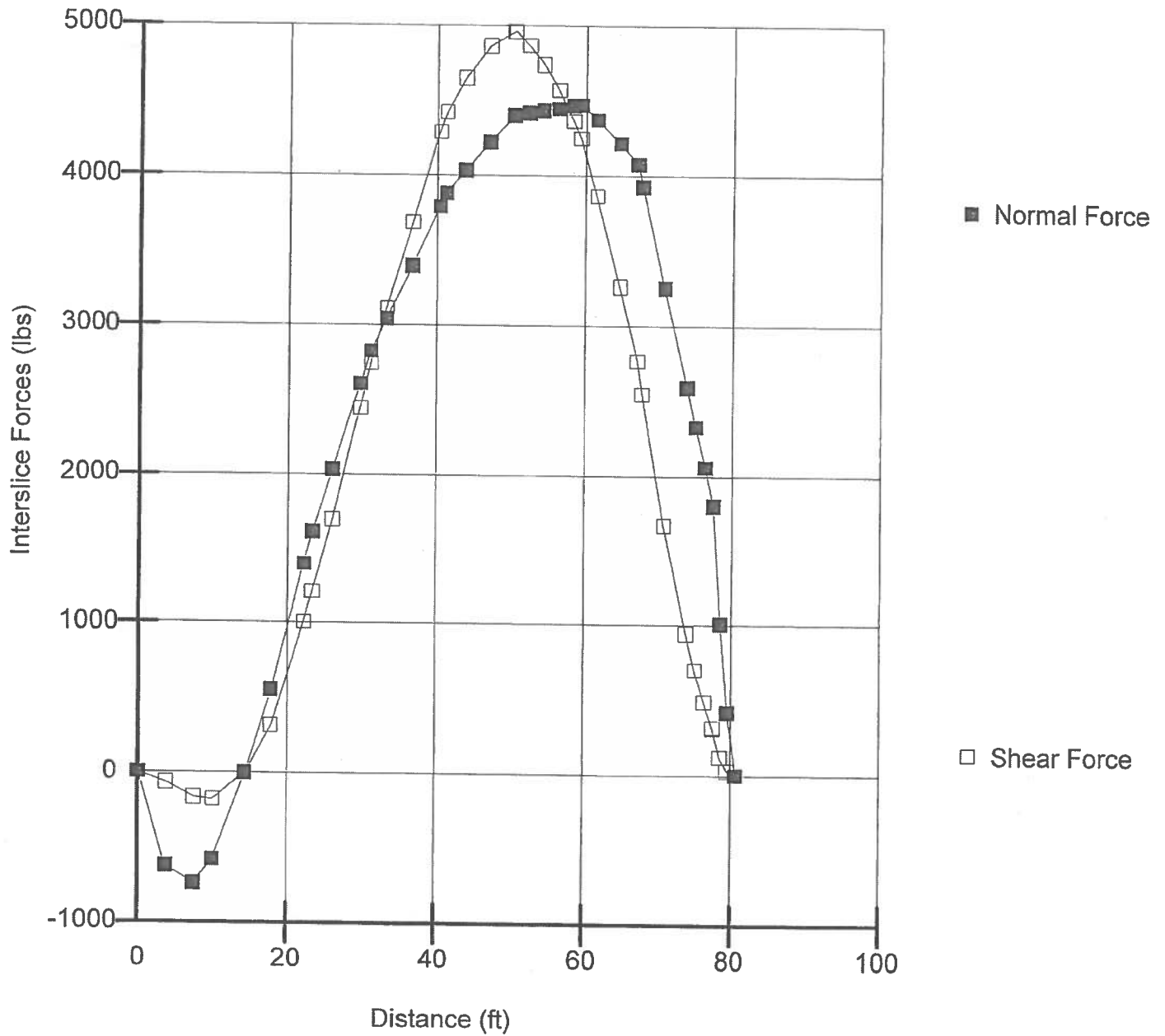
Shear Resistance (psf) vs. Distance (ft)



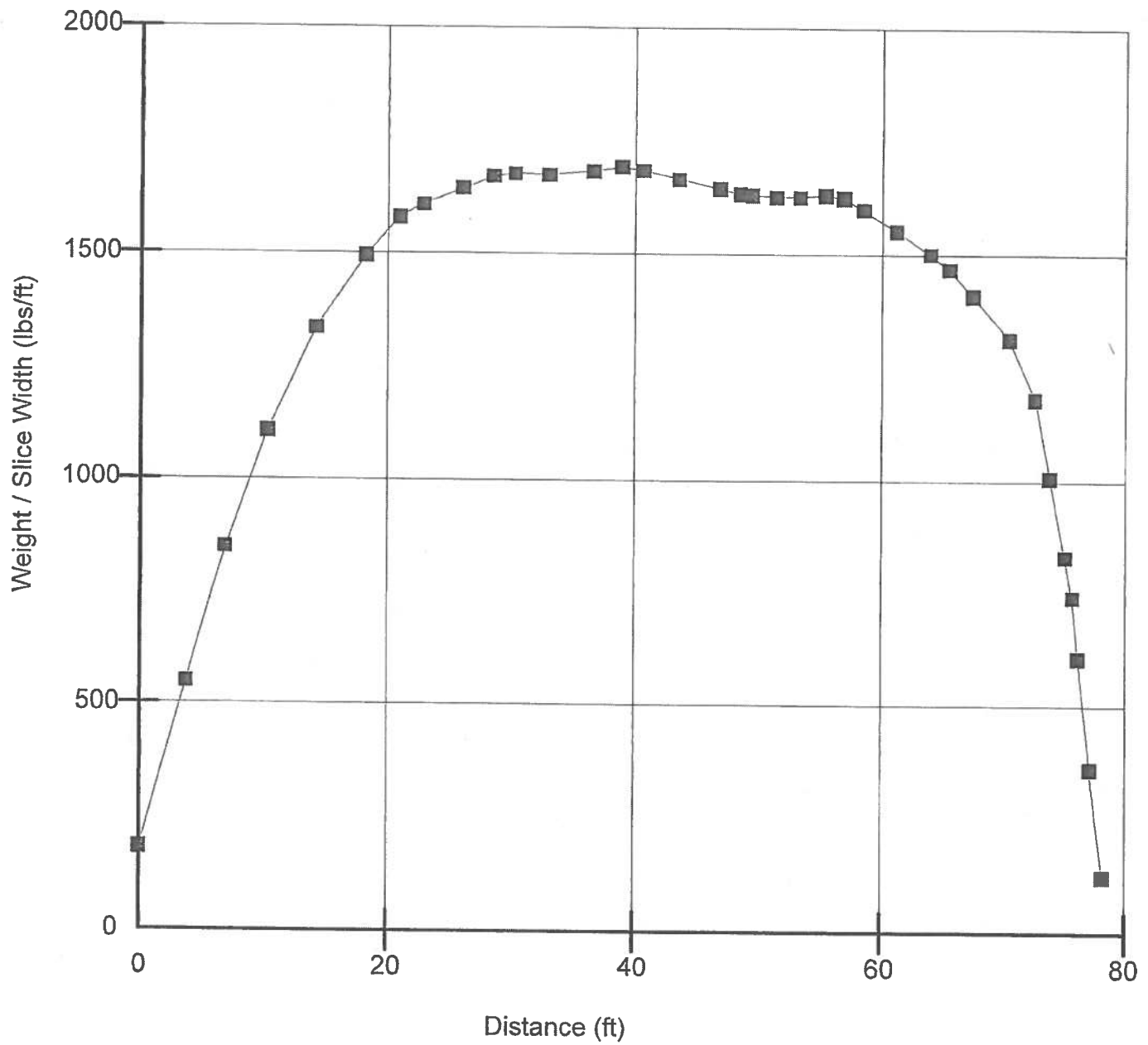
Base Normal Stress (psf) vs. Distance (ft)



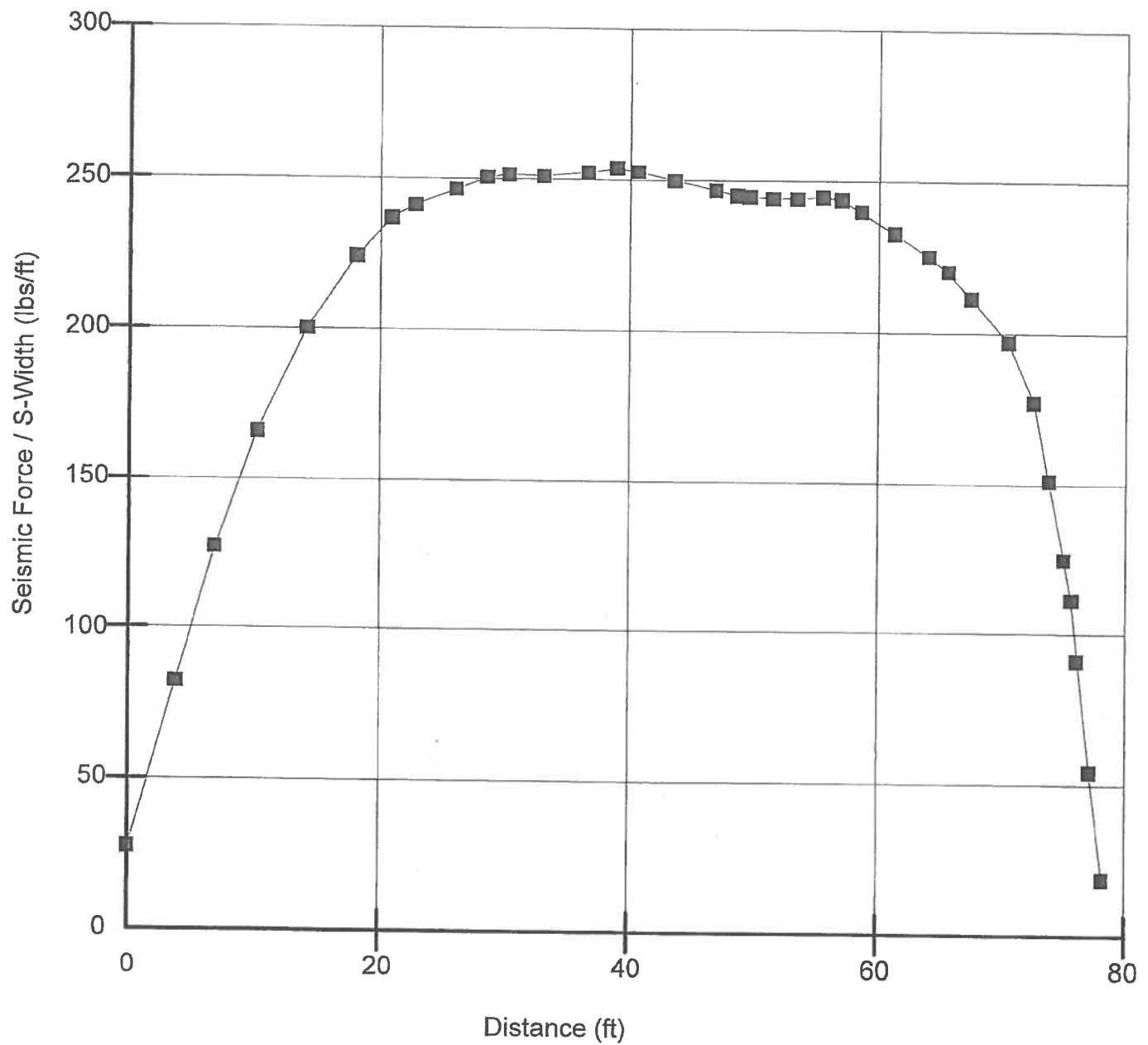
Interslice Forces (lbs) vs. Distance (ft)



Weight / Slice Width (lbs/ft) vs. Distance (ft)



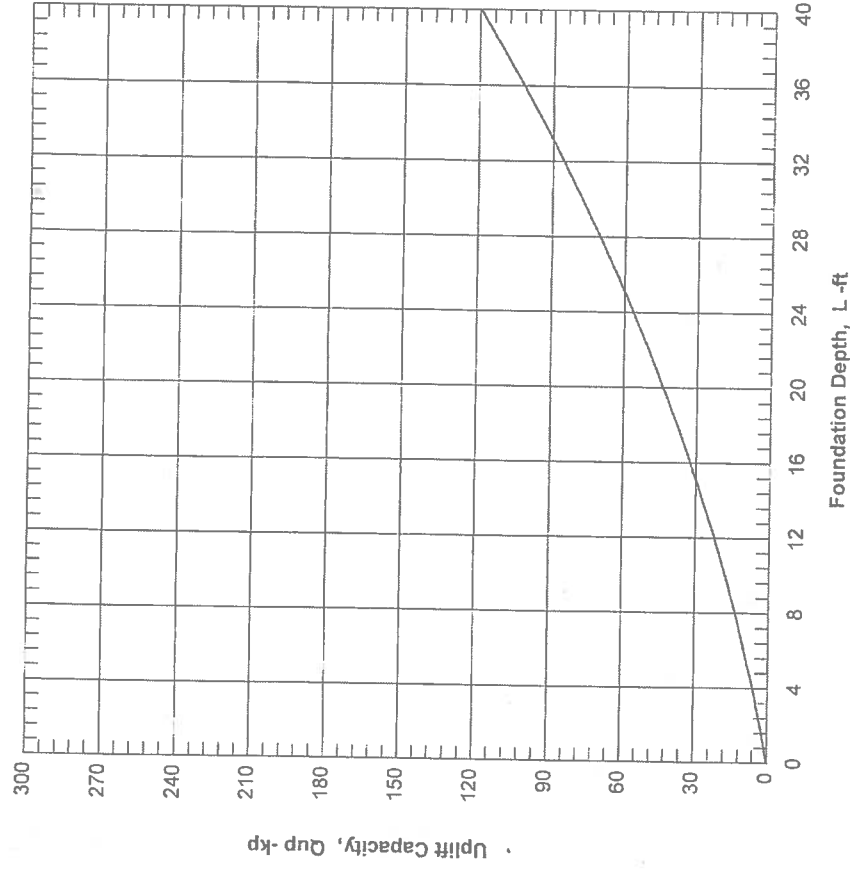
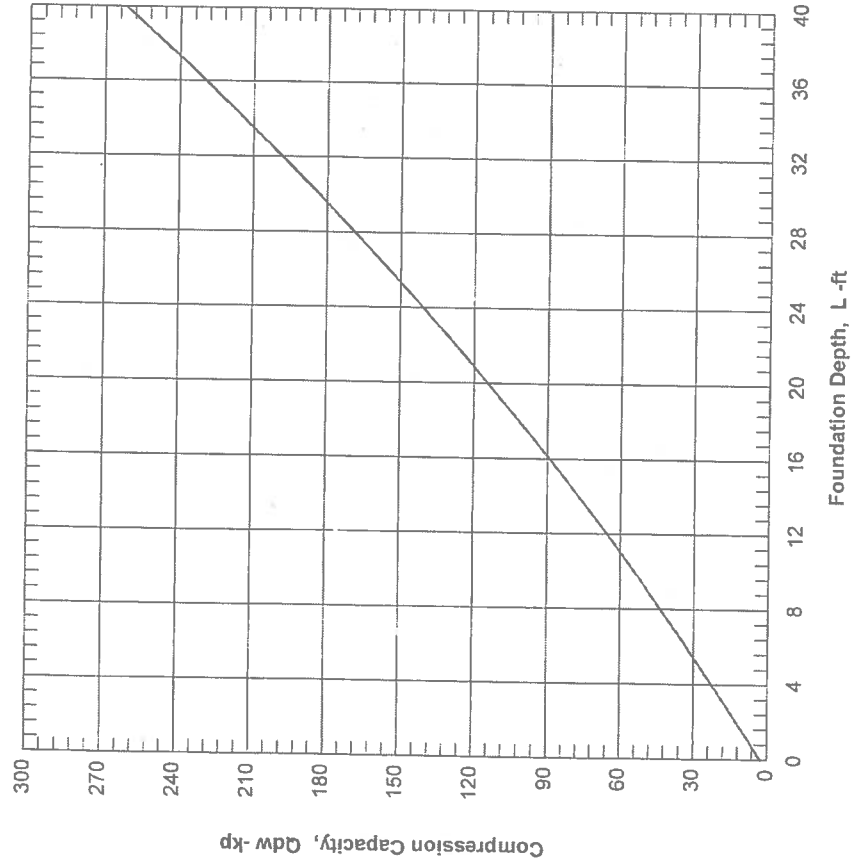
Seismic Force / S-Width (lbs/ft) vs. Distance (ft)



Enclosure A

Pile Capacity Chart

ALLOWABLE CAPACITY vs FOUNDATION DEPTH



Braun & Associates Inc.
PO Box 2004, Buelton, CA

1240 W Micheltorena
New SFR

Figure 1



DESIGN REVIEW ACTIVITIES SUMMARY

1240 W MICHELTORENA ST (MST2014-00555)

R-NEW RESIDENCE

Proposal for a new 3-story, 2,011 square foot single-family dwelling on a 6,098 square foot vacant parcel with a 73% slope in the Hillside Design District. The ground level will be comprised of a 492 square foot 2-car garage and 273 square feet of living area, the middle level will have 637 square feet, and the upper level will have 609 square feet. There will be 149 square foot of deck on the middle level. A new landscape plan is also proposed. The floor-to-lot-area ratio (FAR) is 74% of the required maximum floor-to-lot area ratio (FAR). The proposal includes Staff Hearing Officer review for a requested zoning modification for new construction in the front setback. An encroachment permit is required for construction in the public right of way.

Status: Pending

DISP

Date 3

SFDB-Concept Review (New) - PH

CONT

12/01/14

(Comments only; project requires Environmental Assessment and Staff Hearing Officer review for a requested zoning modification. Project requires a minor encroachment permit for work in the public right of way.)

Board member Bernstein recused herself from this project.

Actual time: 4:43 p.m.

Present: Gelare Macon, Planner; and Mark Travers, Architect.

Public comment opened at 5:09 p.m.

- 1) Jason Crawford, a neighbor at 1223 West Micheltorena Street, expressed concerns regarding the suitability of the lot for development due to the intensity of the slope, the lack of adequate parking on the narrow street during construction, and the large size of the proposal.
- 2) Jean Demro, a neighbor at 1236 West Micheltorena Street, expressed concerns regarding the large size, bulk, and scale of the project. She welcomed a more modest design consistent with Planning Commission comments given to a previous proposal at this lot.
- 3) Jim Fischer, a neighbor at 1244 West Micheltorena Street, expressed concerns regarding potential erosion of the slope and hazards posed by the narrow width of the street.
- 4) Malca Lebell, a neighbor at 1243 West Micheltorena Street, expressed concerns about construction impacts to accessibility of emergency vehicles on the narrow street.
- 5) Alan Kasehagen, a neighbor at 1222 West Micheltorena Street, expressed concerns regarding the removal of the oak trees from the hillside.
- 6) Fray Crease, a neighbor at 1231 West Micheltorena Street, expressed concerns regarding the excessive height and size of the project, suggesting that it be stepped back and screened. She also suggested that a site visit be conducted by the Board members.

Letters of expressed concerns from Fray Crease, Alan Kasehagen, Jean and Jim Demro, and Craig and Sara Donen were acknowledged.

Public comment closed at 5:22 p.m.

Motion: Continued indefinitely to Full Board with comments:

- 1) The Board cannot support the architectural style and feels it is not appropriate for the neighborhood.
- 2) The Board does not support the size of the proposal and feels that it could be reduced.
- 3) The Board understands the need for the proposed grading at the site.

- 4) The Board feels that the third floor could be removed.
- 5) Eliminate the roof deck.
- 6) The Board requests the City clarify the width of Michelotrena St., particularly in front of the property, and as it would relate to access by emergency vehicles and construction impacts.
- 7) Study the size of the building footprint to reduce the amount of trees removed.
- 8) The Board cannot support the modifications at this time without additional information from the City regarding the width of Micheltorena Street and any future plans for the public right of way.

Action: Miller/Woolery, 4/0/0. Motion carried. (Bernstein stepped down, Pierce/Zimmerman absent).

SFDB-Concept Review (Cont.)**CONT****01/26/15**

(Comments only; project requires Environmental Assessment and Staff Hearing Officer review for a requested zoning modification. Project was last reviewed on December 1, 2014.)

Actual time: 4:26 p.m.

Present: Mark Travers, Architect; Gelaré Macon, Applicant; and Bob Flowers, Civil Engineer.

Public comment opened at 4:39 p.m.

1) Jean Demro, a neighbor at 1236 West Micheltorena Street, appreciated the reduction in square footage, but still maintained concerns regarding the size, bulk and scale of the project on the small lot. She noted that the square footage is larger than several homes on neighboring lots. She requested that the living area on the ground level be removed to reduce grading, and that the third story be removed, noting that the home was still too large and needs to be more consistent with the neighborhood.

?

2) Fray Crease, a neighbor at 1231 West Micheltorena Street, expressed concerns regarding the size, bulk, and scale of the home in comparison to neighboring properties. She spoke in favor of the efforts to control construction traffic, yet felt more could be done to accommodate the neighbors.

Public comment closed at 4:43 p.m.

Motion: Continued indefinitely to Staff Hearing Officer to return to Full Board with comments:

- 1) The Board appreciates the applicant efforts to make changes to the project.
- 2) The Board supports the architectural style and the color palate.
- 3) Reduce the size of the bedroom windows.
- 4) Provide a landscape plan illustrating the green wall treatment of the retaining walls.
- 5) The modification is aesthetically appropriate and does not pose consistency issues with the guidelines; it would be impractical to build on the site without the modification.
- 6) The size, bulk, and scale of the architecture are consistent with the neighborhood based on the streetscape, provided that the FAR is at 74%.

Action: Miller/James, 6/0/0. Motion carried.